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AUTHOR Spalter-Roth, Roberta M.; Hartmann, Heidi I.
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ABSTRACT

This document presents a study that views working mothers as primary or co-equal earners, who need wages sufficient to support their families. The study hypothesized that the complex socioeconomic trends of the last two decades have had more of an impact on working mothers' wages than have their specific family relations. The study employed a variety of descriptive and multivariate research techniques to test this hypothesis and investigated the impact of job, human capital, and family characteristics on the hourly wages of working mothers as they vary by race and ethnicity, marital status, and educational levels. After reviewing the demographic, family, human capital, and job characteristics, the study examined the significant predictors of working mothers' wages. The principal finding indicated that family related characteristics were not significant predictors of the wages of working mothers. Rather, the best indicators of a woman's hourly wage rate were her human capital and job characteristics. Based on these findings, the study then estimated the impact of a series of policy strategies that can increase working mothers' earnings. The most effective policy strategies were found to be those that increase a woman's return to work experience to a white male level, her education, and her ability to stay in the workforce. A three pronged strategy that maximizes work experience, increases returns to experience, and increases working mothers' share of full time jobs, was the most effective policy of all those studied, positively impacting the wages of all groups of working mothers. (Author/DK)

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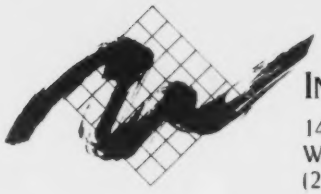

INSTITUTE FOR WOMEN'S POLICY RESEARCH
1400 20th Street, NW, Suite 104
Washington, DC 20036
(202) 785-5100

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INCREASING WORKING MOTHERS' EARNINGS

by

Roberta M. Spalter-Roth

and

Heidi I. Hartmann

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TABLE OF CONTENTS

EXECUTIVE SUMMARY i

I. THE INCREASING IMPORTANCE OF MOTHERS' EARNINGS 1

II. THE CURRENT STUDY 8

- Data Set 9
- Study Population 10
- Definitions of Study Variables 11

III. CHARACTERISTICS OF WORKING MOTHERS 13

- Typical Working Mothers 14
- Selected Family Characteristics by Race and Ethnicity 17
- Selected Human Capital Characteristics by Race and Ethnicity 20
- Selected Job Characteristics by Race and Ethnicity 21
- Selected Characteristics by Educational Level and Race and Ethnicity 23
- Selected Characteristics by Marital Status and Race and Ethnicity 28
- Summary of Findings on the Characteristics of Working Mothers 35

IV. THE IMPACT OF FAMILY, HUMAN CAPITAL, AND JOB CHARACTERISTICS ON HOURLY WAGES 36

- Findings for All Working Mothers 39
- Findings for Non-Hispanic White Working Mothers 42
- Findings for Non-Hispanic Black Working Mothers 43
- Findings for Hispanic Working Mothers 44
- Findings by Educational Level 45
- Summary of Findings from the Multivariate Analyses 49

V. ESTIMATED IMPACT OF POLICY STRATEGIES FOR INCREASING MOTHERS' WAGES AND REDUCING FAMILY POVERTY 51

- The Impact of Policy Changes on Working Mothers' Wages 61
  - Impact of Changes on the Ability to Earn an Above-Sufficiency Wage 61
  - Impact of Changes on Wage Mobility for All Low-Wage Working Mothers 72
- The Impact of Policy Changes on Family Poverty 79
- Summary of Findings from the Policy Analyses 87

VI. FEASIBILITY AND IMPLICATIONS 93

VII. REFERENCES 99

VIII. APPENDIX TABLES 103

TABLES

1. Unweighted Sample Distribution of Working Mothers By Race and Ethnicity and Marital Status 11

2. Characteristics of Working Mothers By Race and Ethnicity (Means or Percentages) 18

3. Characteristics of Working Mothers By Education Level and Race and Ethnicity (Means or Percentages) 24

4. Characteristics of Working Mothers By Marital Status and Race and Ethnicity 29

5. Returns or Losses in Additional Hourly Wages for Factors That Have a Significant Effect on Wages, By Race and Ethnicity 40

6. Returns or Losses in Additional Hourly Wages for Factors That Have a Significant Effect on Wages, By Educational Level 46

7. Impact of Policy Strategies on the Wages of Working Mothers 57

8. Distribution of Working Mothers' Wages By Percentage of Sufficiency Wage 73

9. Effectiveness of Policy Strategies for Wage Mobility of All Groups of Low-Wage Working Mothers 78

10. Impact of Policy Strategies on the Poverty of Working Mothers 82

11. Rank of Policy Strategies 89

CHARTS

1. Eight Typical Working Mothers 15

2. Description of the Independent Variables in the Stepwise Regression Models 38

3. Most Important Factors That Increase Wages of Working Mothers 50

4. Assumptions and Measures Used in Tests of the Impact of Policy Changes on Working Mothers' Wages 54

5. Effectiveness of Policy Strategies in Increasing Mothers' Earnings Above A Sufficiency Wage 71

6. Effectiveness of Policy Strategies: Percent Who Moved Up At Least One Wage Level 76

7. Effectiveness of Policy Strategies in Decreasing Family Poverty 86

APPENDIX TABLES

1. High Growth Industries 104

2. List of High Technology Industries 106

3. Characteristics of Working Mothers By Marital Status, By Education Level and Race and Ethnicity 108

4. Returns and Losses in Additional Hourly Wages for Factors That Have an Effect on Wages of Working Mothers, By Race and Ethnicity 111

5. Returns and Losses in Additional Hourly Wages for Factors That Have an Effect on Wages of Working Mothers, By Educational Level 112

6. Distribution of Low-Wage Working Mothers' Wages By Percentage of Sufficiency Wage Level, By Race and Ethnicity 113

EXECUTIVE SUMMARY

Previous research on both the earnings of working mothers and the poverty of women-maintained families has employed a sex-segregated model that focuses on family-related characteristics to explain women's low wages or their inferior economic position. These family-related characteristics include such variables as marital status, presence of a full-time working spouse, and number and ages of children. Prior studies also consistently regard working mothers as secondary earners rather than as necessary breadwinners.

This study, in contrast, views working mothers as primary (or at least co-equal) earners, needing wages sufficient to support their families. It hypothesizes that the complex socioeconomic trends of the last two decades have had more of an impact on working mothers' wages than have their specific family relations. The study employs a variety of descriptive and multivariate research techniques to test this hypothesis and investigates the impact of job, human capital, and family characteristics on the hourly wages of working mothers as they vary by race/ethnicity, marital status, and educational levels.

After reviewing the demographic, family, human capital, and job characteristics, the study examines the significant predictors of working mothers' wages. Its principal finding is that family-related characteristics are not significant predictors of the wages of working mothers. Rather, the best indicators of a woman's hourly wage rate are her human capital and job characteristics. Based on these findings, the study then estimates the impact of a series of policy strategies that can increase working mothers' earnings. The most effective policy strategies are found to be those that increase: women's returns to work experience to a white male level, their education, and their ability to stay in the workforce. A three-pronged strategy that maximizes work experience, increases returns to experience, and increases working mothers' share of full-time jobs, is the most effective policy of all those studied, positively impacting the wages of all groups of working mothers.

The Increasing Importance of Mothers' Earnings

Over the past twenty years, two concurrent trends have significantly affected the economic status of women and their children: the increase in women's economic responsibility for their families and the rise in women and children living in poverty. Between 1970 and 1990, the labor force participation rate of women increased from about 40 to 67 percent, with mothers accounting for the largest growth of any group within this time period. By 1990, two-thirds of all mothers (22 million) were in the labor force. Over the last decade, the income of married couples with children would not have increased without the increased labor force participation of working mothers.

Women are also increasingly more likely to be solely responsible for their children. Nearly all women have children during their lifetimes, many outside of marriage. Many more become single parents as a result of separation and divorce. Indeed, roughly two-thirds of all mothers can expect to spend some portion of their life as a single mother. Ninety percent of women-maintained households have children in them. Poverty rates for minority women and their children are especially high at 56 and 59 percent, respectively, for black and Hispanic single mother families with children under age 18 in 1988. And, in the past two decades, the number and proportion of children living in one-parent families has doubled. Still other mothers are their families' main breadwinner even if married.

Thus, the earnings of working mothers have become increasingly necessary for their families' economic well-being. It is therefore increasingly important that all women earn enough to support themselves and their families at an adequate level. Yet mothers continue to be viewed as tangential members of the labor force, who, according to neoclassical economic theory, limit their investment in human capital in anticipation of marriage and family. This theory further supposes that when women do work, they choose employment compatible with child rearing--e.g., low-wage jobs that are easily entered and exited. Thus, high job turnover among women is often explained by current or potential marriage and child rearing

responsibilities. In contrast, high turnover among men is often attributed to low wages or poor advancement opportunities.

This type of analysis is an example of a sex-segregated model of work--one in which men's wages are studied in terms of a "jobs model" based on the paid work they do and women's work is analyzed in terms of a "gender model" based on women's supposed willingness to forgo higher wages in order to fulfill their traditional family roles. This same sex-segregated model is also used to explain the poverty of women and children, attributing its increase solely to the decline in life-long marriage to a higher income breadwinner and the increased incidence of children living in single-parent families. Again, in contrast, men's poverty is attributed to job conditions rather than to their marital status.

In opposition to the gendered model, this study investigates the impact of job, human capital, and family characteristics on the employment status and wages of working mothers. We hypothesize that the complex socioeconomic trends of the past few decades--including increases in human capital, changes in industrial and occupational characteristics, and changing patterns of regional and economic growth--have had a stronger impact on working mothers' wages than have their specific family characteristics (such as marital status and number and ages of children). In this study, rather than follow the sex-segregated models which assume that marital status, children, and gender are the primary determinants of women's wages (and therefore compare married to single women, women with children to women without children, or all women to all men), we instead focus only on working mothers and investigate the differences among them as they vary by race/ethnicity, marital status, and educational level. We attempt to identify those policy strategies that would raise the wages of mothers, and thereby improve their families' standard of living.

The Current Study

The study employs a variety of descriptive and multivariate research techniques to test the impact of human capital, job, and family characteristics on the wages of working mothers--the group most often evaluated solely in terms of their family attributes. We investigate the impact of industries (categorized in terms of whether they are high-tech or high-growth), occupations (categorized in terms of whether they are traditionally female-dominated, male-dominated or mixed-gender), unionization, regional wages disparities across the United States, education, years of work experience, marital status, number and ages of children, and race/ethnicity on the wages of working mothers. Based on the resulting research findings, we estimate the impact of a series of policy shifts for increasing the earnings of working mothers and for improving the economic well-being of their families.

In order to conduct this study, IWPR created a special file of working mothers from the 1986 and 1987 panels of the Survey of Income and Program Participation (SIPP), a Census Bureau data set. To be included in the sample a mother had to work a minimum of 600 hours over the 12 month period. IWPR's file combines data from the two panels for the 1987 calendar year and includes records for roughly 4,500 working mothers representing more than 19 million mothers, nationwide. This file was supplemented with additional data on the characteristics of the industries and occupations in which these mothers work. We arrive at a sufficiency wage by adding an extra $1,830--our estimated annual cost of child care for families of working women with at least one child under age six--to the official poverty threshold defined by the U.S. Bureau of the Census. The resulting hourly sufficiency wage for a family of three would be $5.80 per hour (in 1987 dollars) for a mother who works full-time, year-round.

Characteristics of Working Mothers

To learn about today's working mothers and the factors that explain their earnings, we first present brief economic portraits of eight of the most "typical" working mothers (based on

the average characteristics of the most frequent types of working mothers found in the sample). The types are portrayed in Chart 1, with the most frequent type--a white, currently married mother with a high school education or less--as number 1, the next most frequent type as number 2, and so on. It should be noted that white and black mothers are non-Hispanic and that Hispanic mothers may be of any race.

A glance at these portraits shows that no simple correlation exists between family characteristics and labor force status. For example, type 7, a black, currently married working mother with at least some college education is approximately the same age as type 5, a currently married Hispanic working mother with a high school education. The former is more likely to have a child under age six, to have had a baby in the past year, and to have two or more children. She is about as likely to have a full-time earning spouse. Based on these family characteristics, a sex-segregated model would predict that the black working mother would be less likely to have a strong commitment to the workforce than the Hispanic working mother. This is not the case. In fact, despite her greater family responsibilities, the black working mother has more years of work experience, is more likely to be employed in a full-time, year-round job, and earns higher wages. This finding suggests that human capital and job characteristics, *not* family attributes, have a stronger impact on the earning ability of these typical working mothers. Race discrimination may also be a determining factor in these outcomes.

In assessing the impact of demographic, human capital, and job factors on the ability of working mothers to earn a sufficiency wage, we find differences among them as they vary by race/ethnicity, educational background, and marital status. We also find that family characteristics do not appear to systematically account for mothers' wage levels or their human capital and job characteristics. On the average, white working mothers have the highest wages and are the least likely to earn less than $5.80 per hour as compared to black and Hispanic

Chart 1

EIGHT TYPICAL WORKING MOTHERS

(1) Non-Hispanic White, currently married working mother with a high school diploma or less.

This typical working mother is 35 years old; she is more likely to live in the Midwest than other regions of the country. She has a four in 10 chance of having a child under six, a one in five chance of having more than two children (with one under age six), but only about a one in 20 chance of having had a baby in the last year. Eight out of ten have a full-time, working spouse, but two out of ten are their families' major breadwinner. Only six percent of the families' income is provided by someone other than the working mother or her spouse. Eight out of ten have a high school diploma. More than three-quarters work full-time, full-year and half work in traditionally female occupations. About 14 percent are union members. This typical mother has almost nine years of work experience and her average wage is $6.42 per hour. Her family has about a 2 percent chance of being poor.

(2) Non-Hispanic White, currently married working mother with some college or more.

This typical working mother is also 35 years old and more likely to live in the Midwest. She has a one in two chance of having a child under the age of six, a one in four chance of having two or more children (with one under six) and a one in 10 chance of having had a baby in the last year. Out of all the currently married types, she is second most likely to have a spouse working full-time (82 percent do). Only three percent of family earnings are provided by someone other than the working mother or her spouse. Almost half have a college diploma. More than eight out of ten work full-time, year-round and over one half work in traditionally female occupations. Almost one out of five is a union member. She has more than nine years of work experience and her average wage is $9.33 per hour. Her family is least likely to be poor (less than 1 percent are).

(3) Non-Hispanic White, formerly married working mother with a high school diploma or less.

This working mother is slightly younger--just over 34 years of age. She is more likely to live in the Midwest than in other regions of the country. She has almost a four in ten chance of having a child under age six, a one in seven chance of having two or more children (with one less than six), but only a one in fifty chance of having had a baby in the last year. She is the major breadwinner of her family, although 17 percent of family earnings come from another source. More than eight out of ten possess a high school diploma. Eight out of ten work in full-time, year-round jobs, and almost half work in traditionally female occupations. About one out of six belongs to a union. She has nine years of work experience and earns an average of $6.59 per hour. She has the second highest family poverty rate of all eight types (11 percent).

(4) Non-Hispanic White, formerly married working mother with some college or more.

This working mother is the eldest at age 37. She is more likely to live in the Midwest than in other regions of the country. She has only a one in four chance of having a child under age six, is the least likely to have two children (with one under the age six), and only a one in 100 chance of having had a baby in the last year. She is her family's main breadwinner, with only 8 percent of family earnings provided by another family member. More than one-third have a college diploma. She has the most work experience, 11 years on the average. She is the most likely of all the working mothers to be employed full-time, year-round (83.2 percent are), and to be employed in a male-dominated occupation. Almost one out of five belong to a union. She earns the highest average wage--$9.72 per hour. Despite these higher wages, her family has a 5 percent chance of living in poverty.

Chart 1, cont.

EIGHT TYPICAL WORKING MOTHERS

(5) Hispanic, currently married working mother with a high school diploma or less.

This typical working mother is just under 34 years of age. She is most likely to live in the West (half do). She has a fifty-fifty chance of having a child under age six, more than a one in three chance of having more than two children (with the youngest under six), and a one in twenty chance of having had a baby in the last year. She is the most likely to have a full-time working spouse. Despite this fact, her family is the most likely dual-earner family to receive earnings from an additional family member (10 percent do). Almost half do not have high school diplomas. Seven out of ten work in full-time, year-round jobs--the lowest proportion among all eight types of working mothers--and just less than five out of ten work in traditionally female occupations. About 15 percent belong to unions. She has less than eight years of work experience (the least of all eight types), and earns $5.77 per hour. Her family has a 4 percent chance of being poor.

(6) Non-Hispanic Black, currently married working mother with a high school diploma or less.

This typical working mother is 35 years old. She is most likely to live in the South Atlantic region of the country. She has a four in ten chance of having a child under age six, a one in four chance of having two or more children (with at least one under age six), and a one in twenty chance of having had a baby in the last year. Eight out of ten have a full-time working spouse, but two out of 10 are their families' main breadwinner (8 percent of family earnings are provided by an additional family member). Three-quarters have a high school diploma and three-quarters work full-time, year-round. Only four out of ten work in traditionally female occupations. Only 10 percent belong to unions. She has 7.5 years of work experience and earns the lowest hourly wage--$5.62 per hour of all these typical working mothers. Her family has a 6 percent chance of being poor.

(7) Non-Hispanic Black, currently married working mother with some college or more.

This typical working mother is just under 34 years old. She is more likely to live in the South than in other regions of the country. She has almost a six in 10 chance of having a child under six, almost a four in 10 chance of having two or more children (with at least one under age six), and more than a one in 10 chance of having had a baby in the last year. (These rates are the highest of any of the typical working mothers.) Eight out of 10 have a full-time working spouse, and about 5 percent of family earnings are provided by an additional family member. Almost four out of 10 have a college diploma. Eight out of 10 work full-time, year-round, with about half employed in traditionally female occupations. More than one out of five is a union member (the highest percentage among all these eight typical working mothers). She has almost nine years of work experience and earns an average of $8.60 per hour. Her family has less than a 2 percent chance of being poor.

(8) Non-Hispanic Black, formerly married working mother with a high school diploma or less.

This typical working mother is among the oldest--almost 37 years of age. She is more likely to live in the South Atlantic region than in other regions of the county. She has slightly less than a one in four chance of having a child less than six years old, slightly more than a one in 10 chance of having two or more children (with at least one under age six), and a one in 100 chance of having had a baby in the last year. She is her family's main breadwinner, but 18 percent of her family's earnings are provided by an additional family member. Almost six out of 10 have a high school diploma. Somewhat more than seven out of 10 work full-time, year-round (among the lower percentages for typical working mothers) and about four out of ten work in traditionally female occupations. About one in five is a union member. She has about nine years of work experience and earns $5.63 per hour, on the average. Despite her substantial work experience, her family has almost a one in three chance of being poor.

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation. These typical working mothers represent the types with the largest numbers of sample respondents.

working mothers. These wage differences can likely be explained not only by the racial advantage that white mothers have, but also by their higher levels of educational achievement and full-time, year-round employment.

The findings also suggest that there is no single relationship between working mothers' family situation--the presence or absence of a spouse and the number and ages of her children--and their job characteristics. If there were a simple correlation, we would expect married women (who can more likely depend on the earnings of another breadwinner) to be the least likely to work full-time, year-round. In fact, single, never married working mothers are the least likely to do so, while formerly married working mothers are only slightly more likely than currently married working mothers to be employed in these full-time, year-round jobs. Furthermore, married working mothers have the highest average hourly wages ($7.71 per hour) and the highest percentage earning more than $5.80 per hour.

Although family characteristics thus do not seem to be the most salient predictor of working mothers'wages, they are significantly related to poverty rates for the families of working women, with single mothers being much more likely than married mothers to live in poor families.

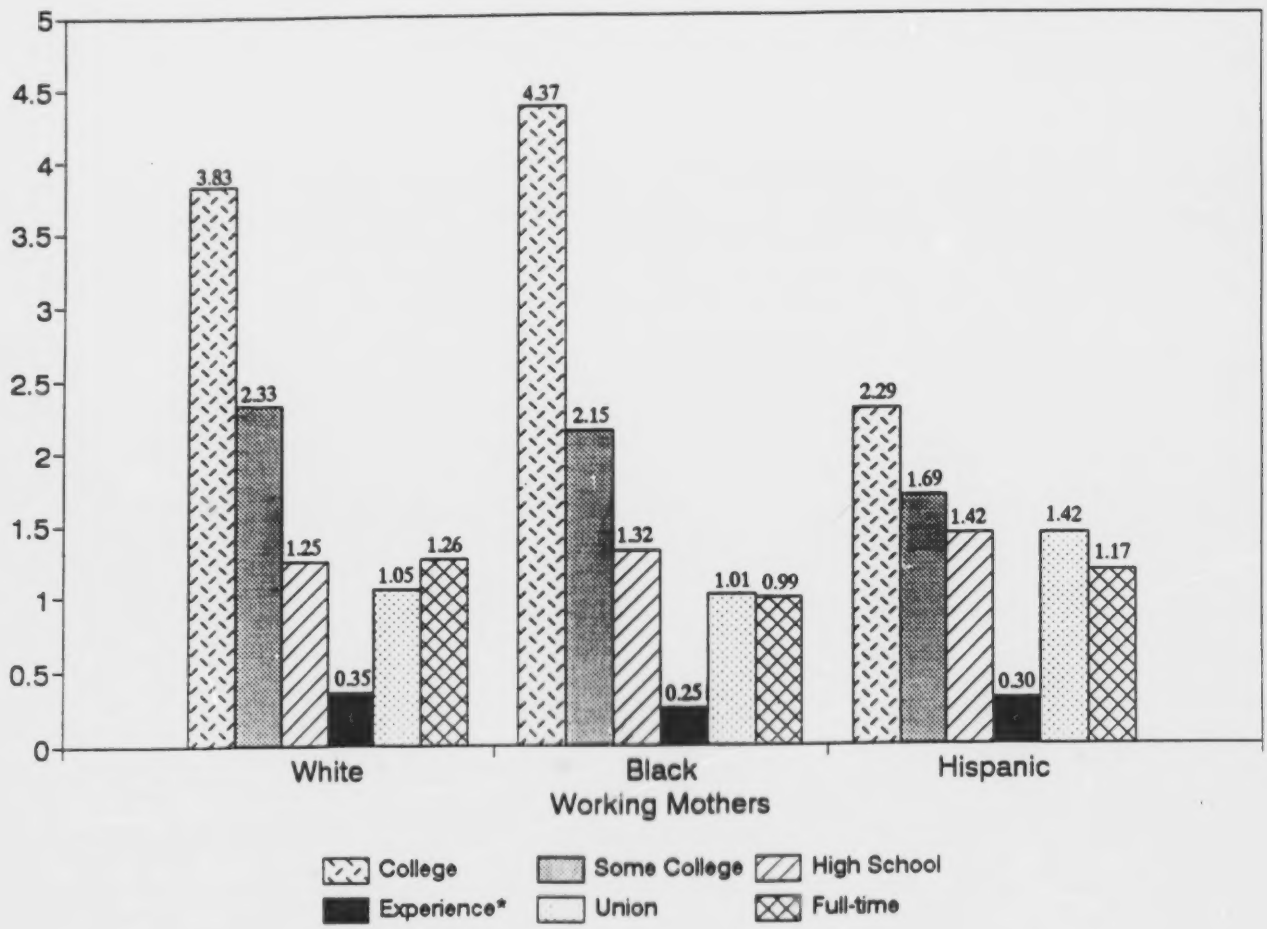
The Impact on Hourly Wages of Family, Human Capital, and Job Characteristics

In order to isolate and compare the relative importance of human capital, jobs, and family characteristics for different groups of working mothers, an ordinary least squares, step-wise regression analysis was done with the natural logarithm of wages as the dependent variable.

The most important factors for increasing the wages of white, black, and Hispanic working mothers are shown in Chart 3 (as numbered in the full report). They are: education;

CHART 3
MOST IMPORTANT FACTORS
THAT INCREASE WAGES OF WORKING MOTHERS

Dollar Per Hour Return



*Five Years of Work Experience

Source: IWPR calculations based on the 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Note: Although MAREDUC (the interaction variable indicating married with college degree) explained the most variation in the hourly wages of Hispanic mothers in the step-wise regression, it was not significant and is not included in the chart. Therefore, the college variable alone, which was significant, is included in the chart; its smaller effect relative to non-Hispanic black and white mothers is almost certainly due to the large effect of MAREDUC.

employment in a full-time, year-round job; union membership; and years of work experience. For all working mothers, the dollar returns range from a low of seven cents per hour for every year of work experience to a high of $3.87 per hour for a college degree (relative to the wages of those who have not completed high school). For all working mothers, education is the most important variable in the model and has the strongest impact on wages. In contrast, although years of work experience is the third most important variable to enter into the model, the returns in hourly wages for one year of work experience are very small (7 cents per hour).

Black mothers' returns in hourly earnings for a high school or college diploma are slightly higher than those of white mothers but their returns to work experience, union membership, and full-time employment are slightly lower. Hispanic working mothers gain more from union membership, a high school diploma, and employment in a high tech industry than do their white and black counterparts, but they gain less from college education.

These most important factors for increasing working mothers' wages are followed by three additional industrial and occupational factors--employment in a high tech industry, employment in a male-dominated occupation, and employment in a mixed-gender occupation. Employment in the low-wage South and deindustrializing Midwest significantly lowers wages, especially for black working mothers.

The effects of race in the regression model confirm our previous suggestion concerning racial inequalities in wages. We find that non-Hispanic blacks lose 42 cents per hour and Hispanics lose 27 cents in hourly earnings (although the figure for Hispanics is not statistically significant) compared to their non-Hispanic white counterparts, holding all other factors constant.

Family characteristics--marital status, presence of a full-time working spouse, number and ages of children--are not significant in the model. We find little evidence to suggest that family characteristics have a significant impact on working mothers' wages or that working mothers systematically forego higher wages for increased family responsibilities. (The possible exception

is Hispanic working mothers, for whom the presence of two children with one under age six does affect their wages negatively.) The only other significant family variable is the percentage of family income earned by other family members aside from a spouse. This factor has a slight negative effect on hourly earnings, with working mothers earning about one cent less per hour for every additional percent of earnings from other family members.

Lastly, we compare the hourly wages of working mothers with a high school diploma or less versus those of mothers with some college or more. Again we find that family characteristics have a limited impact on these women's earnings. Instead, education, employment in a full-time, year-round job, and years of work experience are the three most important factors that significantly increase these mothers' wages. The implication of these findings from the multivariate analysis is that policy strategies to increase wages should be directed toward human capital attainment and the characteristics of mothers' employment.

Estimated Impact of Policy Strategies for Increasing Mothers' Wages

Based on the findings from the multivariate analyses, we model and test the impact of a series of policy changes that are likely to have a positive impact on working mothers' wages. We analyze the effect of these policy changes with three goals in mind, expecting that not all policies will have an equal impact in achieving all goals: 1) improving the ability of mothers to earn a sufficiency wage ($5.80 in 1987 dollars), because a wage at this level, if earned full-time, year-round, would enable most mothers to survive above poverty on their own; 2) improving wages for those working mothers earning less than 150 percent of a sufficiency wage, because at low earnings, any amount of improvement is significant; and 3) improving mothers' wages enough to move poor families out of poverty.

The changes or policy shifts that we test include: increasing working mothers' educational levels (especially those with a high school diploma or less); increasing the percentage of mothers in full-time, year-round jobs; increasing the returns working mothers gain

for their years of experience as well as maximizing their years of experience; increasing working mothers' coverage by union contracts; increasing the percentage of working mothers employed in high-tech firms; increasing the percentage of working mothers employed in male-dominated occupations; increasing the level of wages for all regions of the country to the level in the Northeast region; increasing the percentage of working mothers with job training; decreasing race-based wage differentials; and finally, a combination of three policies--increasing the percentage of mothers in full-time, year-round jobs along with maximizing their years of work experience and equalizing the returns they gain for these years of experience to the level of white men.

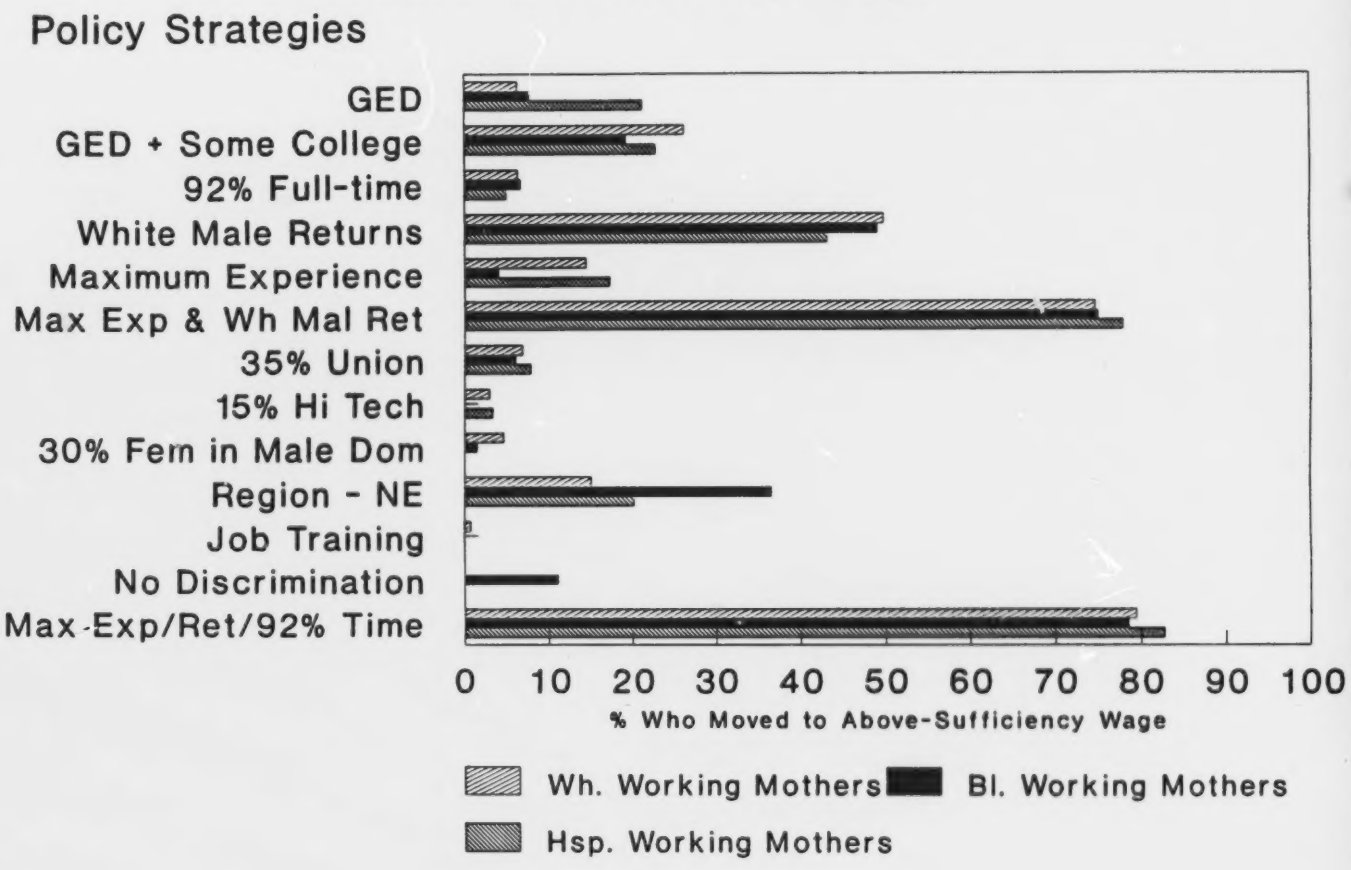
Which changes or policy shifts are the most effective as a sufficiency wage strategy? And for which race/ethnic groups?

The results show that some of these suggested policy changes affect a greater number of working mothers, while some affect a relative few. When these strategies are ranked in terms of their effectiveness for moving working mothers' wages above a sufficiency level, the most effective policy measure for all race/ethnic groups is the three-pronged strategy to maximize years of work experience, to reward work experience at the level enjoyed by white male workers, and to increase the percentage of working mothers employed full-time, year-round to the same rate as ever-married men. Chart 5 (as numbered in the full report) summarizes the effectiveness of the various policy strategies in raising working mothers' hourly wages above a sufficiency level.

The second most effective sufficiency wage policy strategy is the two-pronged strategy to maximize years of work experience and to reward work experience with the same returns enjoyed by white male workers. As Chart 5 shows, maximizing women's work experience alone is a less effective strategy. On the other hand, raising working mothers' returns to work

CHART 5

Effectiveness of Policy Strategies in Increasing Mothers' Earnings Above A Sufficiency Wage



Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

experience to the same level as that of white men is, by itself, one of the most effective wage strategies for all groups of mothers, ranking third, and bringing half of all low-wage mothers up to the sufficiency standard.

Decreasing regional wage disparities is another broad and effective sufficiency wage strategy. It clearly helps low-wage black and Hispanic mothers who lose the most when employed in the low-wage Southern region of the country. Earning a GED is an especially effective sufficiency wage measure for Hispanic working mothers. These findings suggest that the focus of public policy should be not only on increasing working mothers' education level and hours of work, but also on ensuring that working mothers receive returns equal to those received by white males for their work efforts.

Which changes or policy shifts are most effective as wage mobility strategies for working mothers at different wage levels, and how does this vary by race/ethnicity?

Our policy goal here is not to help women reach a specific target (the sufficiency wage level), but rather to help women at all low-wage levels (defined as less than 150 percent of a sufficiency wage) move up at least one wage level (defined as increments of 25 percent of the sufficiency wage level)--a less restrictive goal which we refer to as wage mobility. We find that all the policy measures are more efficient (in terms of advancing women from their current wage level to at least the next highest wage level) and more effective (in terms of the proportion of all low-wage mothers that each policy moves up) in achieving wage mobility than in achieving wage sufficiency. Policies that positively affect the wages of large numbers of working mothers at all wage levels, and of all race/ethnic groups, are considered to have a universal impact. The four most universally effective policy changes are:

(1) Simultaneously maximizing working mothers' years of work experience, rewarding experience at the same level as white men, and increasing full-time, year-round employment;

(2) Simultaneously working mothers' years of work experience and increasing the returns they receive to a white male level;

(3) The single strategy of increasing the dollar returns to working mothers' work experience (currently averaging 7 cents per hour) to the level of returns obtained by white men (currently at 24 cents per hour); and

(4) The dual strategy og encouraging working mothers without a high school diploma to obtain a GED and those with a diploma to obtain some college education--this strategy is especially effective for lower-wage working mothers and for Hispanic working mothers, the group least likely to have higher educational levels.

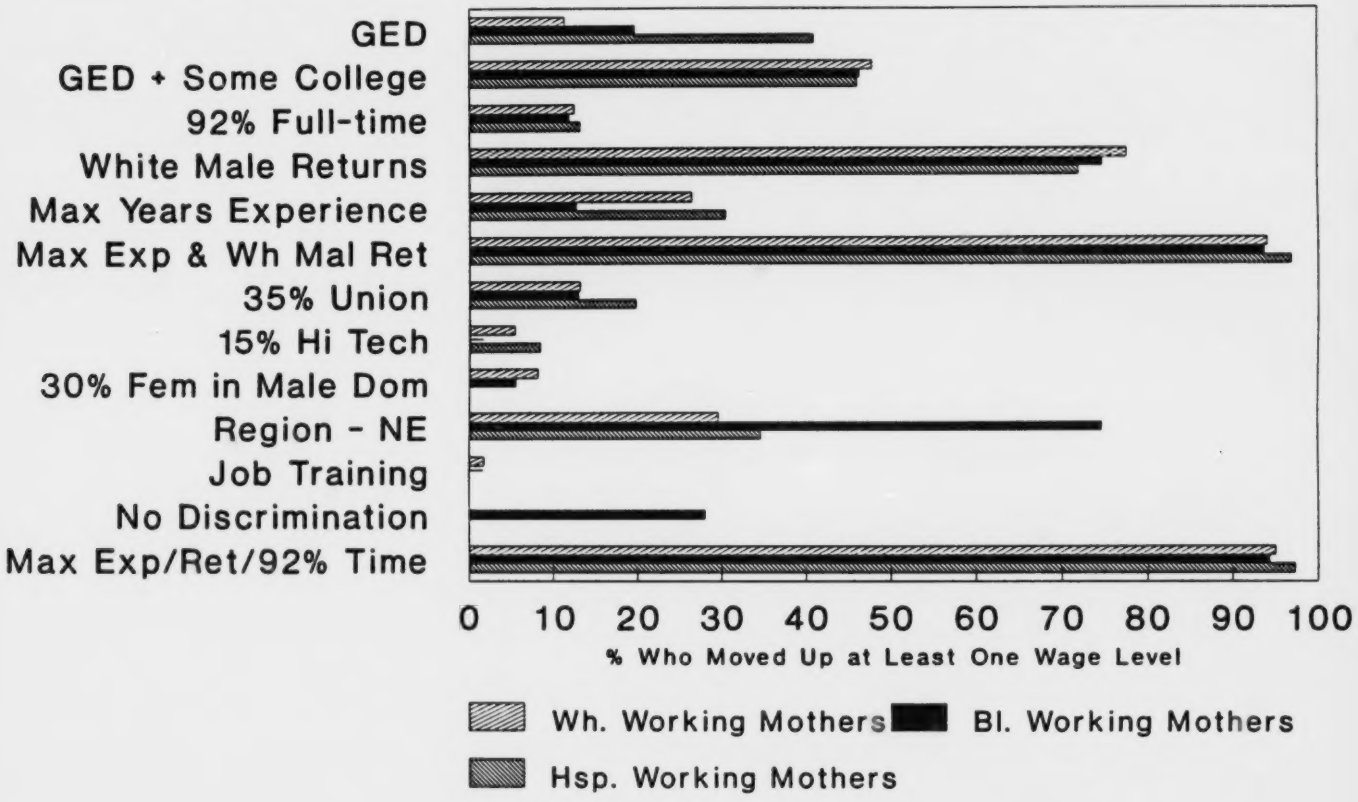
Other very effective wage mobility strategies for all categories of working mothers are reducing regional differences and increasing women's work experience. Less effective strategies are increasing their employment in male-dominated occupations to the 30 percent tipping-point level and increasing their employment in high-tech industries. These strategies are available to a more limited number of working mothers, given the current occupational and industrial composition of the economy. Finally, job training, as currently structured, appears to have limited effects for increasing working mothers' wages. Chart 6 (as numbered in the full report) summarizes the effect of the various policy strategies on the wage mobility of working mothers.

How effective are these policies in bringing the families of these working mothers out of poverty?

Because many researchers suggest that the official poverty measure of the U.S. Bureau of the Census severely underestimates a realistic minimum level of living for families of working mothers, we use two different definitions of poverty in evaluating the effectiveness of policies to reduce poverty. The first definition, referred to as "Poverty I," is based on the official annual poverty thresholds established by the Census Bureau for various family sizes (e.g., $9,690 in 1987 dollars for a family of three; $11,650 in 1987 for a family of four). The second definition, "Poverty II," adds an extra $1,830--our estimated annual cost of child care--to the official poverty threshold for families of working women with at least one child under age six. This additional

CHART 6

Effectiveness of Policy Strategies: % Who Moved Up at Least One Wage Level



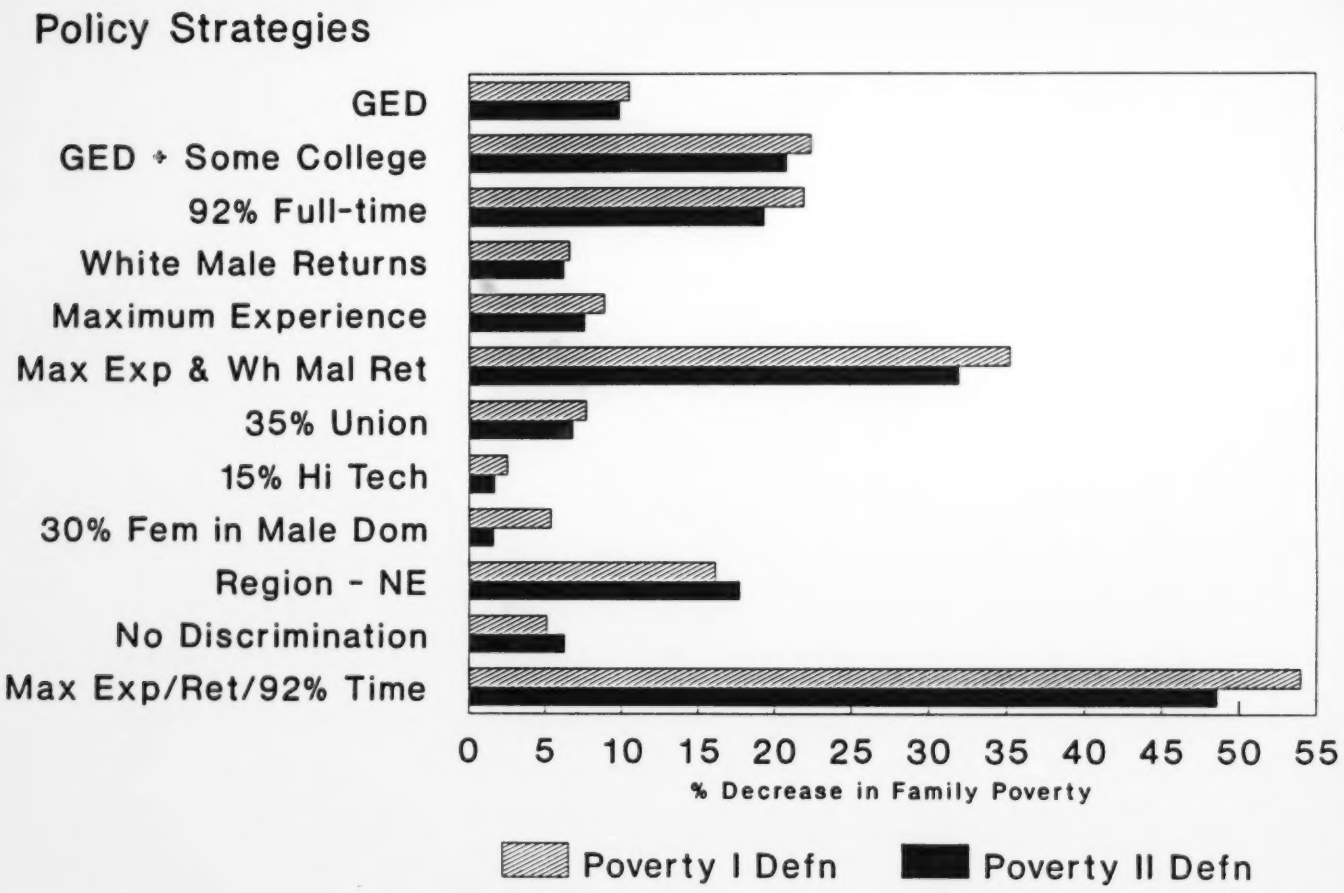
Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

amount would raise the annual poverty threshold for a family of three from $9,690 (in 1987 dollars) to $11,520 (or approximately $5.80 per hour, if the mother worked full-time, year-round). This second measure produces a conservative increase in a family's annual poverty threshold because child care costs added are for only one child, regardless of the number of children under age six in the family or the number of older children also needing chid care.

Chart 7 (as numbered in the full report) summarizes the effectiveness of the proposed policy strategies in moving all poor families of working mothers from a below-poverty to an above-poverty threshold, where poverty is defined in two ways (Poverty I and Poverty II). The same strategies that are most likely to be successful in increasing the wages of working mothers are, in general, the same strategies that are successful in moving their families out of poverty. They include: (1) the three-pronged strategy of maximizing work experience, increasing returns to work experience commesurate to those of white men, and increasing working mothers' share of full-time jobs to the level of ever-married men--a strategy that would decrease the family poverty rate by roughly half, regardless of whether definition I or II is used; (2) the two-way strategy of simultaneously increasing the returns to work experience and maximizing work experience--likely to bring more than one in three families out of poverty (defined either way); (3) the two-way strategy of increasing educational levels (obtaining a GED or completing some college for those with high school diplimas), which would likely bring more than one in five families out of poverty (defined either way); (4) the single strategy of increasing employment in full-time, full-year jobs, which would likely bring more than one in five families out of poverty (defined either way); (5) the single strategy of decreasing regional wage disparities, which would likely bring about one in six families of all working mothers, and more than one in five families of black working mothers, out of poverty; and (6) the single educational strategy of encouraging GED completion.

CHART 7

Effectiveness of Policy Strategies in Decreasing Family Poverty



Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Conclusions

In contrast to the sex-segregated models of analysis, this study investigated the impact of human capital and job characteristics, as well as family situation, on the wages of working mothers, as they vary by race/ethnicity, marital status, and educational levels. The study hypothesized that the complex socioeconomic trends of the last decades--including increases in human capital, changes in industrial and occupational characteristics, and changes in patterns of regional economic growth--have more impact on working mothers' wages than does their family situation. We conclude that this hypothesis was confirmed.

Our findings strongly suggest that the way to raise women's incomes is not necessarily, as a sex-segregated analysis would suggest, for them to remain single and/or childless, or alternatively to depend on the earnings of a male breadwinner. Instead, our findings suggest that the same factors that can be expected to raise men's wages--human capital, the quality of jobs, and the conditions of work--also appear to be most important in raising the wages of working mothers.

The more universal policy strategies that we have discussed above can best be viewed as heuristic devices. Although they may represent long-term goals, none of these effective strategies is impossible, and each can be reached, albeit in incremental steps, using specific available remedies such as: financial aid for education, comparable worth policies; pay equity adjustments; glass ceiling initiatives designed to increase women's job mobility to higher echelon, higher paying jobs; and increased enforcement of anti-discrimination laws. But implementation of these strategies on a necessary scale is unlikely until policymakers and employers make a commitment to overcoming cultural stereotypes and to viewing working mothers as having an equal and legitimate need and right to employment in jobs paying wages sufficient to support themselves and their families.

INCREASING WORKING MOTHERS' EARNINGS

by

Roberta M. Spalter-Roth

and

Heidi I. Hartmann

with the assistance of

Christina A. Andrews, Linda M. Andrews, Mona Danner, and Usha Sunkara

Prior research on the earnings of working mothers and the poverty of women-maintained families has employed a sex-segregated model that focuses on family-related characteristics to explain their low wages or their inferior economic position. Family-related characteristics include such variables as marital status, presence of a full-time working spouse, and number and ages of children. Previous studies also consistently see working mothers as secondary earners rather than as necessary breadwinners.

This study views working mothers as primary (or at least co-equal) earners, needing wages sufficient to support their families. It hypothesizes that the complex socioeconomic trends of the last two decades have more of an impact on working mothers' wages than do their specific family relations. The study employs a variety of descriptive and multivariate research techniques to test this hypothesis, and to investigate the impact of job, human capital, and family characteristics on the wages of working mothers as they vary by race/ethnicity, marital status, and educational levels. Based on the resulting research findings, the study estimates the impact of a series of policy changes on increasing the wages of working mothers and the econmic well-being of their families.

THE INCREASING IMPORTANCE OF MOTHERS' EARNINGS

The earnings of working mothers are increasingly important for their families' well-being. Two trends have significantly affected the well-being of women, families, and children, over the last two decades. One is the increase in women and children living in poverty. The proportion of poor families that are maintained by women grew throughout the 1970s and 1980s (Pearce, 1989). Poverty rates for minority women and their children are especially high, reaching 56 percent for black female single parent families with children under age 18, and 59 percent for Hispanic single parent families in 1988 (U.S. Bureau of the Census, 1989a). And, in the past two decades, the number and proportion of children living in one-parent families have doubled.

The earnings of these single mothers can have a significant impact on raising the standard of living of poor families with children. Indeed, among single mothers who work full time, year-round, their poverty rate is reduced below the national average, to about 10 percent in 1989.[1]

The second trend affecting family well-being is the increased importance of the earnings of married women with children in keeping family incomes from falling. Between 1970 and 1990, the labor force participation of mothers increased from 40 percent to 67 percent, or two-thirds. By 1990, 22 million mothers were in the labor force. The 7.5 percent rise in the income of married couples with children between 1979 and 1987 can be attributed to increased mothers' earnings (Mishel and Frankel, 1991). Indeed, without this increase in mothers' earnings the incomes of families in all but the top income quartile would have declined.

Mothers are the group whose labor force participation has increased the most over the last several decades, and they are increasingly responsible for their families' and their children's economic well-being. Nonetheless, mothers are still viewed as tangential members of the labor force, who, according to neo-classical economic theory, limit their investment in human capital in anticipation of marriage and family. When they do work, supposedly mothers choose jobs that are compatible with child rearing--those that are easy to leave and to reenter, and subsequently, have flat wages (see, for example, the classic statement of this position in Mincer and Polachek, 1974). Thus, high job turnover among women is often explained by marriage and child rearing responsibilities (or potential marriage and child rearing responsibilities). In contrast, high turnover among men is often attributed to low-wages or to poor advancement opportunities.

This type of analysis is an example of what Feldberg and Glenn (1979) call a gendered or sex-segregated model of work; one in which men's economic status is analyzed in terms of a

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[1] Hartmann and Spalter-Roth, 1990. It should be noted, however, that those single mothers currently working full-time, year-round are those in the best position to do so; their average earnings are almost certainly higher than the wages of those who work part-time or the potential wages of those not at work.

"jobs model" based on the paid work they do and women's economic status is analyzed in terms of a "gender model" based on their relations to the family. The jobs model treats the work that people do as a primary independent variable, while the gender model ignores the characteristics of jobs and working conditions and instead views the relationship to employment as derivative of personal characteristics and family relationships. The jobs model is applied to male workers who are equated with being breadwinners, while the gender model, which views women as wives and mothers, is used to explain women's labor force participation and economic status. Variables used in the jobs model usually include occupation and industry, full-time or part-time status, coverage by union contracts, and geographic region. Variables used in the gender model usually include such family-related characteristics as marital status, husband's earnings, and number and ages of children.

Sex-segregated models are also common in explaining women's poverty. Many researchers attribute women's and children's poverty solely to the decline in life-long marriage and the increased number of children living with one parent. For example, recent research by McLanahan et al. (1989) indicates that the major reasons for women's poverty are the lack of marriage to a higher income breadwinner and the presence of children whom women are responsible for supporting. Such an analysis fails to examine the role played by women in the labor force, and especially their low earnings, in explaining the poverty of families of female single parents, especially those of minority women. In contrast, men's poverty is attributed to job conditions rather than their single status.

Although there has been some movement away from sex-segregated models since Feldberg and Glenn's 1979 path-breaking article (the pay equity literature which focuses on women's occupations is a notable example) they still underlie much economic explanation of women's wages. For example, in a widely cited recent book, Women's Quest for Economic Equality, Victor Fuchs (1988) revives the neo-classical economic argument of Mincer and Polachek (1974) and claims that women's inferior economic position stems predominantly from

conflicts between career and family rather than from discrimination against women by employers. Women, he states, feel a stronger desire for children than do men and feel more responsible for them. These feelings create an economic disadvantage for women (p.3ff). Compared to unmarried women with no children under age six, married women with young children are more likely to be employed on a part-time basis. Using cross-sectional data limited to white women, Fuchs compares married women of different age groups to unmarried women to contend that by the time they are in their 40s, married women earn only 85 percent as much as unmarried women. Fuchs employs these data to emphasize the negative impact of marriage and "related homemaking responsibilities" on women's wages. He gives four reasons why these responsibilities have a negative impact on women's wages. They are: (1) child-related absences damage earnings; (2) desire for shorter and more flexible hours constrains job choices and is exchanged for lower wages; (3) investment in human capital is limited by current or potential mothers; and (4) maximum energy is not devoted to market work. The implication of Fuchs' analysis is that if women wish to improve their economic status they must either find a full-time earning spouse to support them and any children they might desire (but understand that by so doing they will trade off this support for lower earnings), or they must remain single and not have children.

Previous research by the Institute for Women's Policy Research (IWPR) supports the contention that low wages are common among the majority of working mothers and directly contribute to their families' poverty. In a recent study on the relation between motherhood and low-wage work, we found that in 1984 more than half of all working mothers who earned less than a sufficiency wage on an hourly basis had children to support (Spalter-Roth et al., 1990). Of these low-wage mothers, 44 percent (38 percent of white mothers, 70 percent of black mothers and 50 percent of Hispanic mothers) were single parents and their family's main breadwinner. This study also shows that marriage, even to another low-wage worker, substantially reduces poverty rates of children and families, but both such workers are at risk of

falling into poverty should they lose their jobs or their marriage breakup. Another IWPR study shows that more than one-quarter of all low-wage workers are in families either with current incomes below the sufficiency level or with incomes that would fall below the sufficiency level if the earnings of the low-wage worker were lost (Spalter-Roth et al., 1989). This study also shows that, even after controlling for differences in education and labor force experience, the probability of being a low-wage worker among women of color is four times the probability among white men; for white women, the probability is three times that for white men.

Based on this previous research, we suggest that marriage alone is not sufficient as a poverty-prevention strategy. Marriage does nothing to increase the wages of underemployed, unemployed, and low-wage women (or men). Although marriage can be a means for many workers (especially white women) to increase family income, it is not an adequate means for many black and Hispanic women, and it does not work as a lifetime poverty-prevention strategy for many white women. According to Martin and Bumpass (1989), approximately two-thirds of all mothers can expect to spend some portion of their lifetime as a single parent. Likewise, remaining childless appears to be an unlikely poverty-prevention strategy. Despite declining fertility rates, later marriage and increased divorce, only 18 percent of those working women who have completed their child bearing years have remained childless (U.S. Bureau of the Census, 1989b).

If marriage or remaining childless do not seem to be appropriate strategies for increasing women's income, and if women's earnings are increasingly important to their families' well-being, then what factors *are* likely to increase their earnings? In answering this question, we take a new approach and focus on women with children--specifically on the differences among them as they vary by race, ethnicity, marital status, education level, and the characteristics of their jobs, to see which mothers do well in the labor market and what factors are associated with their higher earnings. Earlier approaches that compare married women to single women (making the questionable assumption that married women have always been

married and single women have always been unmarried), women with children to women without children, or all women to all men implicitly follow a sex-segregated model in that they focus on women's marital status, children, or gender. In contrast, we assume that earnings are affected by the complex socioeconomic trends that are restructuring the U.S. economy. Some of the major trends to examine, in terms of their impact on mothers' wages, include increases in human capital, changes in industrial and job characteristics, changes in the regional distribution of investment, growth and workers, and growing inequalities in the distribution of income. These major trends are described briefly, below:

Changes in Human Capital

(1) The education level of women and minorities rose over the last two decades, although the rewards these groups received from additional education are lower than those received by white men (Adelman, 1991).

(2) Despite declines in industrial and service sector productivity and predictions that jobs requiring higher skills will grow faster than low skill jobs, few firms and employers appear to worry about developing new systems for increasing workers skills (The Commission on the Skills of the American Workforce, 1990).

Changes in Industrial and Job Characteristics

(1) The growing share of jobs that are part-time, with involuntary part-time workers (workers who would prefer full-time employment) accounting for most of the growth in part-time employment since 1970 (Tilly, 1991).

(2) The continued capital investment in and resulting growth of the service sector, with 90 percent of the more than 35 million new jobs developed between 1974-1985 occurring in this sector (Thurow, 1989).

(3) The increasing entry of women workers into certain male-dominated occupations during the 1970s and 1980s including: wholesale and retail buyers; personnel, training and labor relations specialists; accountants and auditors. Women also made inroads into customarily male sales, clerical and service occupations (for example, computer operators). Their gains were modest in traditionally male blue collar work. Within skilled and semi-skilled occupations, women had disproportionate gains only among guards, bakers, typesetters and bus drivers. Women made almost no headway into many craft occupations such as mechanics, carpenters, electricians, painters, machinists and butchers (Reskin and Roos, 1990). However, many of these skilled, male-dominated occupations are in decline.

(4) The decline in unionization in the blue collar sector and increased unionization in the public sector and among professionals (U.S. Department of Labor, 1989).

Changes in the Regional Distribution of Investment, Growth, and Workers

(1) Uneven regional growth rates between 1979 and 1986, with the South and the West experiencing the greatest growth (15.4 percent, respectively), the North experiencing more moderate growth (9.8 percent) and the Midwest (especially the North Central region) experiencing virtually no growth (0.8 percent) (Markusen and Carlson, 1989).

(2) Migration patterns of workers have affected the regional distribution of race/ethnic groups--for example, according to the 1990 Census, blacks are moving away from metropolitan areas in the industrial North and toward metropolitan areas in the South and West (N.Y. Times, July 6, 1991).

(3) The changing composition of research and development and exports, with increases in military hardware and international banking and decreases in non-military consumer durables (Markusen and Carlson, 1989).

(4) The increased mobility of capital (investment) and labor. The internationalization of production sites by U.S. firms as well as foreign investment in the U.S. have contributed to the loss of certain jobs in the U.S. as well as to international labor migrations, including substantial migrations to the U.S. (Sassen, 1988).

Growth in Income Inequalities

(1) A decline in the real wages of blacks relative to whites beginning in the late 1970s, including increased disparities between black and white women (Williams, 1990: Figart, et. al., 1989). Likewise, between 1979 and 1987, low-wage workers experienced declines in real wages while high wage workers experienced modest improvements (Mishel and Frankel, 1991).

(2) Changes in the wage structure of the economy during the 1980s made it increasingly difficult to escape poverty through hard work. The earnings of heads of poor families grew much more slowly with the economic expansion of the 1980s than earnings did during the 1960s. For the poorest 10 percent of the population, real wages actually fell with economic growth in the 1980s--GNP growth of 1 percent was correlated with a decrease of 32 cents in real wages. Near poor families had similar patterns. In the 1980s the poor worked more, but falling real wages offset increased hours of work (Blank, 1991).

(3) The continued disparity in wages between regions of the country. Despite employment growth and regional development, the South--with its heritage of slavery and cheap labor as its most distinctive resource--remained the lowest wage region of the country (Glickman and Glasmeier, 1989).

We hypothesize that the above complex socioeconomic trends have a stronger impact on the ability of working mothers to earn a living wage than do their specific family relations; we test this hypothesis using a variety of research strategies in the current study.

THE CURRENT STUDY

In contrast to studies that employ sex-segregated models of analysis, this study investigates the impact of jobs as well as family characteristics on the employment status and wages of working mothers--the group of workers most often characterized solely in terms of their family characteristics. We are particularly interested in the impact of the changing economic structure on working mothers' ability to earn a wage that can support themselves and their children. Thus, in testing the study hypotheses, we investigate the kinds of work available to different groups of working mothers and the extent to which paid work results in the ability to earn a sufficient wage. We examine the returns in wages to working mothers' participation in full-time versus part-time jobs, high tech and high growth industries, traditionally-female versus non-traditional occupations, unionized versus non-unionized jobs, and employment in different regions of the country, as well as to their demographic and human capital characteristics. Because working mothers include both single and married women, we compare them on the basis of their marital status. And because much of the literature explaining women's wages is limited to an analysis of white women (see for example, Corcoran, Duncan and Ponza, 1983), we compare white, black and Hispanic working mothers. Finally, because of the importance of human capital in many of these analyses (see for example, McNeil and Lamas, 1987), we compare those working mothers with a high school diploma or less to those with some college education or more.

In testing the relative impact of jobs, human capital, and family characteristics for the economic well-being of working mothers (and their families), we investigate the following sets of specific questions:

> (1) Who are today's working mothers? What are their average demographic, human capital and job characteristics, and what is their resulting economic status? What commonalities and differences do we see among them as they vary by race and ethnicity, educational level, and marital status?
>
> (2) What factors have the most important impact on the wages of different groups of working mothers? Does marital status and the presence of children negatively affect

wages? How does investment in human capital affect wages? Who benefits and who loses from factors associated with economic restructuring--employment in high tech and high growth industries and in non-traditional occupations, employment in unionized jobs, employment in different regions of the country, and in full or part-time jobs?

Based on the answers to these questions, we then test a variety of suggested human capital, industrial, occupational, and anti-discrimination policy strategies that may be able to accomplish the goal of increasing the ability of working mothers to earn an above-sufficiency wage, and to better their (and their families') economic well-being. In the final section of the study we answer the following set of specific questions:

(3) What changes or policy shifts affect the most working mothers? Which changes or policy shifts are the most effective as a sufficiency wage strategy? And for which race/ethnic groups? Which changes or policy shifts are most effective as wage mobility strategies for working mothers at different levels in the wage distribution, and how does this vary by race/ethnicity? How effective are these policies in bringing the families of these working mothers out of poverty?

Data Set

To conduct the current study, IWPR created a special file of working mothers from the 1986 and 1987 panels of the Survey of Income and Program Participation (SIPP), a Census Bureau data set that collects information from about 13,000 households in each panel across a 24 to 28 month period. This longitudinal panel survey is especially useful for researchers studying the relationship among job characteristics, demographic characteristics and earnings, as it contains information on occupation, industry, unionization, firm size, hourly wages, hours of work, work experience and job tenure, as well as educational attainment, participation in job training programs, age, marital status, numbers and ages of children, race and ethnicity, health and disability status. IWPR's file combines data from the two panels for the 1987 calendar year and includes records for about 4,500 working mothers. Additional data, from other government sources, concerning the growth and technology level of the industries in which working mothers are employed and the gender composition of their jobs were merged onto the special file.

Study Population

Working mothers are defined as those women who were the designated parent or guardian of one or more children under age 18 at some time during calendar year 1987 and who worked for at least 600 hours during the year. (We used this non-restrictive definition of motherhood in order to include new mothers who gave birth during the calendar year). Married mothers are defined as those who are married with spouse present for at least seven months of the 12-month period. Formerly married working mothers are defined as women who are separated, divorced or widowed for at least seven months of calendar year 1987 and single working mothers are defined as those who had not been married as of the first seven months of calendar year 1987. (If a woman did not fall into any of these definitions, she was assigned her marital status at the beginning of the year.)

This set of definitions resulted in an unweighted sample of 4499 working mothers, representing more than 19 million working mothers.[2] Of the total unweighted sample of 4499 working mothers, 76.3 percent are married and 23.7 percent are either single (never married) or formerly married. Also 79 percent are non-Hispanic white, 11 percent are non-Hispanic black, 7 percent are Hispanic, 2 percent are non-Hispanic Asian or Pacific Islanders and 0.5 percent are non-Hispanics belonging to other racial groups. This distribution is found in Table 1. (It should be noted that Hispanic people may be of any race, and that in Table 1, and throughout the study, those sample members who identified themselves as Hispanic have been removed from the white, black, Asian, and other race groups). Examining the distribution of the unweighted sample, we concluded that there were too few Asian and Pacific Islanders and too few "other-race" working mothers to include in the analysis. The analysis presented here is therefore limited to white, black and Hispanic working mothers.

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[2] The number of working mothers resented by this sample is smaller than the CPS count of the number of mothers in the workforce (19 as compared to 22 million) because we are including only those who worked more that 600 hours in the calendar year 1987.

Table 1.

UNWEIGHTED SAMPLE DISTRIBUTION OF WORKING MOTHERS
BY RACE AND ETHNICITY AND MARITAL STATUS

	Married	Single	Total
Total	3433	1066	4499
Non-Hispanic White	2862	689	3551
Black	232	257	489
Hispanic	233	99	332
Asian	92	13	105
Others	14	8	22

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Definitions of Study Variables

Sufficiency Wage

In this study, wages are classified on the basis of whether they are above or below $5.80 per hour in 1987 dollars, a level that can be considered sufficient to bring the income of a working mother with two children just above the official poverty level for a family of three *plus* child care costs for one child. If earned full-time, year-round, this wage would bring a family of three to an annual income just above the U.S. Bureau of the Census' poverty threshold, $9690, *plus* average child care costs for working women at or near poverty of $1830 per year.[3] The annual income resulting from full-time, year-round employment (figured at 2000 hours per year)--$11,600 in 1987 dollars--is still substantially below the $15,000 level that many analysts consider appropriate for a minimal living standard for a family of three with a working mother

[3] Average child care expenditures of $1830 per year for poor working mothers with child care expenses were calculated from data in O'Connell and Bachu, 1990, p. 11, which indicates that mothers earning $610 per month are spending 25 percent of their income for child care.

(Ruggles, 1990; Jencks and Edin, 1990; Helburn and Morris, 1990).

Characteristics of Industries and Occupations

Data was added to each mother's record on the working file to classify the industry and occupation of her employment as high tech, high growth, and non-traditional. The SIPP provides three-digit codes for both industry and occupation which were used to match data from other government sources concerning these industries and occupations.

(1)"High growth" industries are defined in terms of employment growth. Using annualized CPS employment data from the 1989 Handbook of Labor Statistics (Table 19), we calculated a five year growth rate (from 1983-1988) for each three digit SIC code. Those industries with an average growth rate of approximately one standard deviation above the grand average were labelled as high growth industries. (One standard deviation above the average results in a five year growth rate of 30 percent.) Appendix Table 1 shows the average growth rate for the selected high growth industries. We merged five year growth rates, calculated from the CPS data, onto the SIPP-based working data file. We then determined the growth category of the industry (high growth or not) in which each member of the sample was employed during the last quarter of 1987. No information on industry growth was available for approximately seven percent of the sample. Information was missing for a very slightly higher percentage of single as compared to married mothers (7.9 as compared to 7.0 percent), more highly educated mothers (i.e., college graduates), and Hispanic working mothers.

(2)"High tech" definitions vary widely, but almost all include computers and microelectronic components (Weiss, 1985). Weiss argues that the reason high technology industries are singled out in a policy sense is economic: they have been growing while other parts of the economy have been stagnating (1985:80). A definition that includes an economic growth component is offered by Hall and Markusen (1982, 1983, as cited in Breheny et al., 1985). This definition of high tech includes all industries which, over a ten year period, had exhibited a two percent per annum growth rate in employment, and had a ratio of non supervisory and production workers to total employment 20 percent below the national average. According to Breheny et al. this measure rests on two assumptions: that high-technology industries create higher than average employment opportunities and that occupational composition is disproportionately professional and technical (1985:121). Since we wished to examine growth levels of industries separately, we chose an alternative definition, that does not include a growth component. This definition, developed by Paul Hardlock of the U.S. Department of Labor, is based upon the percentage of Research and Development (R and D) employment in an industry, as reflected in available data from the Occupational Employment Statistics (OES) survey. These data were collected in 1987, 1988, and 1989 from all manufacturing industries and selected non-manufacturing industries with sufficient R and D employment; these industries are drawn from three-digit 1987 Standard Industrial Classification (SIC) categories. The industries classified as Level I have a percentage of R and D employment at least 50 percent higher than the average for all industries. Level II

industries are those with R and D employment equal to or greater than the average but less than 50 percent above the average. All other industries have below average proportions of R and D employment. (See Appendix Table 2 for the list of Level I and Level II industries.) We merged this set of industrial descriptors onto the SIPP-based working file and then determined if the industry in which each member of the sample worked during the last quarter of 1987 was or was not a high-tech (Level I or II) industry. Information was missing for less than three percent of the sample.

(3)"Occupations" are defined as "non-traditional," "traditional," or "mixed" based on the percentage of female workers in each of the three-digit occupational categories used in the SIPP. Based on previous definitions by Reskin and Hartmann (1986), occupations are defined as non-traditional (from a women's perspective) if fewer than 30 percent of the workers are female and traditional if 70 percent or more of the workers are female. All other occupations are defined as mixed. We used 1987 Current Population Survey (CPS) data published in the 1989 Handbook of Labor Statistics (Table 18) to determine the percentage of women in each three digit occupational category. We merged this set of occupational descriptors onto the SIPP-based working file and then determined whether the occupation held by each member of the sample during the last quarter of 1987 was traditional, non-traditional, or mixed. Unfortunately, occupation data was not provided in the SIPP for 4.6 percent of all working mothers. In addition, the CPS provided no information concerning the percentage of women in the relevant occupation for 12.1 percent of all working mothers in the sample. We used occupational data from the 1980 Census of Population and Housing in an attempt to develop proxy information on the percent of males and females in the occupations missing from the 1987 CPS data. By doing this we reduced the number of occupations without percent female data from 86 to five and the number of observations without percent female data from 466 to 36.

In the following sections we present our research findings concerning: (1) the characteristics of working mothers and their jobs; (2) the factors that best explain the hourly wages of working mothers, especially their ability to earn a sufficiency wage; and (3) the policy shifts that would improve their hourly earnings and reduce their families' poverty.

CHARACTERISTICS OF WORKING MOTHERS

In this section we present descriptive results from several cross-tabulation analyses to examine the relationships among demographic, human capital, and job characteristics of working mothers. We attempt to answer the following questions:

Who are today's working mothers? What are their average demographic, human capital, and job characteristics and what is their resulting economic status? What commonalities and differences do we see among them as

they vary by race and ethnicity, educational level, and marital status?

In developing this analysis we use the following elaboration design. First we compare the family, human capital, and job characteristics of all working mothers in the sample as they vary by race and ethnicity. Next, we add an additional human capital characteristic to the analysis--educational level--to see if this additional factor affects the distribution of family, human capital, and job characteristics among working mothers as they vary by race and ethnicity. Finally, we compare working mothers by marital status as well as by race and ethnicity to see how this family characteristic affects the distribution of working mothers across the remaining variables. (Unfortunately the sample sizes are too small for us to disaggregate all the race/ethnic groups of working mothers by marital status and educational level simultaneously.) This elaboration design allows us to identify the characteristics that appear most related to the ability to earn a wage sufficient to bring families out of poverty--relationships that are more systematically tested by multivariate regression analysis, the results of which are presented in the following section.

Typical Working Mothers

Along with the plethora of descriptive data contained in the tables discussed below, we present another method for answering the question "Who are today's working mothers?" We present brief economic portraits of eight "typical" working mothers with different race/ethnicity, marital statuses, and educational backgrounds. These eight portraits are based on the average characteristics of the most frequent types of working mothers in the sample. The data used to construct these types can be found in Appendix Table 3. The types are portrayed in Chart 1, with the most frequent type as number 1, the next most frequent type as number 2, and so on.

A glance at these portraits shows that no single relationship exists between family characteristics and labor force status. For example, Type 7, non-Hispanic black, currently married working mothers with college education are approximately the same age as Type 5,

Chart 1

EIGHT TYPICAL WORKING MOTHERS

(1) Non-Hispanic White, currently married working mother with a high school diploma or less.

This typical working mother is 35 years old; she is more likely to live in the Midwest than other regions of the country. She has a four in 10 chance of having a child under six, a one in five chance of having more than two children (with one under age six), but only about a one in 20 chance of having had a baby in the last year. Eight out of ten have a full-time, working spouse, but two out of ten are their families' major breadwinner. Only six percent of the families' income is provided by someone other than the working mother or her spouse. Eight out of ten have a high school diploma. More than three-quarters work full-time, full-year and half work in traditionally female occupations. About 14 percent are union members. This typical mother has almost nine years of work experience and her average wage is $6.42 per hour. Her family has about a 2 percent chance of being poor.

(2) Non-Hispanic White, currently married working mother with some college or more.

This typical working mother is also 35 years old and more likely to live in the Midwest. She has a one in two chance of having a child under the age of six, a one in four chance of having two or more children (with one under six) and a one in 10 chance of having had a baby in the last year. Out of all the currently married types, she is second most likely to have a spouse working full-time (82 percent do). Only three percent of family earnings are provided by someone other than the working mother or her spouse. Almost half have a college diploma. More than eight out of ten work full-time, year-round and over one half work in traditionally female occupations. Almost one out of five is a union member. She has more than nine years of work experience and her average wage is $9.33 per hour. Her family is least likely to be poor (less than 1 percent are).

(3) Non-Hispanic White, formerly married working mother with a high school diploma or less.

This working mother is slightly younger--just over 34 years of age. She is more likely to live in the Midwest than in other regions of the country. She has almost a four in ten chance of having a child under age six, a one in seven chance of having two or more children (with one less than six), but only a one in fifty chance of having had a baby in the last year. She is the major breadwinner of her family, although 17 percent of family earnings come from another source. More than eight out of ten possess a high school diploma. Eight out of ten work in full-time, year-round jobs, and almost half work in traditionally female occupations. About one out of six belongs to a union. She has nine years of work experience and earns an average of $6.59 per hour. She has the second highest family poverty rate of all eight types (11 percent).

(4) Non-Hispanic White, formerly married working mother with some college or more.

This working mother is the eldest at age 37. She is more likely to live in the Midwest than in other regions of the country. She has only a one in four chance of having a child under age six, is the least likely to have two children (with one under the age six), and only a one in 100 chance of having had a baby in the last year. She is her family's main breadwinner, with only 8 percent of family earnings provided by another family member. More than one-third have a college diploma. She has the most work experience, 11 years on the average. She is the most likely of all the working mothers to be employed full-time, year-round (83.2 percent are), and to be employed in a male-dominated occupation. Almost one out of five belong to a union. She earns the highest average wage--$9.72 per hour. Despite these higher wages, her family has a 5 percent chance of living in poverty.

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Chart 1, cont.

EIGHT TYPICAL WORKING MOTHERS

(5) Hispanic, currently married working mother with a high school diploma or less.

This typical working mother is just under 34 years of age. She is most likely to live in the West (half do). She has a fifty-fifty chance of having a child under age six, more than a one in three chance of having more than two children (with the youngest under six), and a one in twenty chance of having had a baby in the last year. She is the most likely to have a full-time working spouse. Despite this fact, her family is the most likely dual-earner family to receive earnings from an additional family member (10 percent do). Almost half do not have high school diplomas. Seven out of ten work in full-time, year-round jobs--the lowest proportion among all eight types of working mothers--and just less than five out of ten work in traditionally female occupations. About 15 percent belong to unions. She has less than eight years of work experience (the least of all eight types), and earns $5.77 per hour. Her family has a 4 percent chance of being poor.

(6) Non-Hispanic Black, currently married working mother with a high school diploma or less.

This typical working mother is 35 years old. She is most likely to live in the South Atlantic region of the country. She has a four in ten chance of having a child under age six, a one in four chance of having two or more children (with at least one under age six), and a one in twenty chance of having had a baby in the last year. Eight out of ten have a full-time working spouse, but two out of 10 are their families' main breadwinner (8 percent of family earnings are provided by an additional family member). Three-quarters have a high school diploma and three-quarters work full-time, year-round. Only four out of ten work in traditionally female occupations. Only 10 percent belong to unions. She has 7.5 years of work experience and earns the lowest hourly wage--$5.62 per hour of all these typical working mothers. Her family has a 6 percent chance of being poor.

(7) Non-Hispanic Black, currently married working mother with some college or more.

This typical working mother is just under 34 years old. She is more likely to live in the South than in other regions of the country. She has almost a six in 10 chance of having a child under six, almost a four in 10 chance of having two or more children (with at least one under age six), and more than a one in 10 chance of having had a baby in the last year. (These rates are the highest of any of the typical working mothers.) Eight out of 10 have a full-time working spouse, and about 5 percent of family earnings are provided by an additional family member. Almost four out of 10 have a college diploma. Eight out of 10 work full-time, year-round, with about half employed in traditionally female occupations. More than one out of five is a union member (the highest percentage among all these eight typical working mothers). She has almost nine years of work experience and earns an average of $8.60 per hour. Her family has less than a 2 percent chance of being poor.

(8) Non-Hispanic Black, formerly married working mother with a high school diploma or less.

This typical working mother is among the oldest--almost 37 years of age. She is more likely to live in the South Atlantic region than in other regions of the county. She has slightly less than a one in four chance of having a child less than six years old, slightly more than a one in 10 chance of having two or more children (with at least one under age six), and a one in 100 chance of having had a baby in the last year. She is her family's main breadwinner, but 18 percent of her family's earnings are provided by an additional family member. Almost six out of 10 have a high school diploma. Somewhat more than seven out of 10 work full-time, year-round (among the lower percentages for typical working mothers) and about four out of ten work in traditionally female occupations. About one in five is a union member. She has about nine years of work experience and earns $5.63 per hour, on the average. Despite her substantial work experience, her family has almost a one in three chance of being poor.

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation. These typical working mothers represent the types with the largest numbers of sample respondents.

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currently married Hispanic working mothers with a high school education. Type 7 mothers are more likely than Type 5 mothers to have a child under age six, to have had a baby in the last year, and to have two or more children. They are equally likely to have a full-time earning spouse. Based on these family characteristics, a sex-segregated model would predict that the black working mother would be less likely to have a strong commitment to the workforce than the Hispanic working mother. The portraits show that this is not the case. The black working mother has more years of work experience, is more likely to be employed in a full-time, year-round job, and earns higher wages, despite her greater family responsibilities. This finding suggests that the connection between education and labor market behavior is an important one. Relationships among the variables are described in the detailed tables to follow.

Selected Family Characteristics by Race and Ethnicity

Table 2, Panel A, shows the family characteristics of all working mothers and of white, black, and Hispanic working mothers separately. The findings show commonalities among these women; they are between 34 and 35 years of age, on the average. There are similarities among the number and ages of their children: between 42 and 48 percent of them have at least one child under age six (Hispanic working mothers are the most likely to have a young child); between 20 and 30 percent have two or more children with one under age six (here again, Hispanic working mothers are the most likely to fall into this category); and between 5 and 7 percent gave birth to a child in the last year (with white women slightly more likely to have done so).

But there are also differences. Marital status is the most apparent family difference among these working mothers. Black working mothers are much less likely to have a full-time working spouse (38 percent as compared to 66 percent for white mothers and 59 percent for Hispanic mothers), they are much more likely to be single (21 percent as compared to 3 percent for white mothers and 8 percent for Hispanic working mothers), or to be formerly married (32

Table 2.

CHARACTERISTICS OF WORKING MOTHERS BY RACE AND ETHNICITY
(MEANS OR PERCENTAGES)

Panel A.

Demographics	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic
Age in Years	34.7	34.8	33.9	34.5
Presence of Children				
% Child Under 6 Years	43.4	43.1	42.3	47.6
% Baby in Last Year	6.9	7.2	5.3	6.1
% 2+ Kids & 1 Under 6 Years	21.4	20.7	22.1	27.7
% Disabled	6.5	6.3	8.4	6.4
Marital Status				
% Div., Sep., Widowed During Year	2.2	2.0	3.1	3.4
% Div., Sep., Widowed	19.8	17.7	32.3	23.5
% Never Married	5.3	2.9	20.9	7.6
% Currently Married	76.1	80.6	47.4	69.8
% Married & College Graduate	16.2	18.1	8.6	7.0
% Full-time Working Spouse	62.2	65.8	38.2	58.8
% Other Family Earnings	7.9	6.6	13.8	12.9

Panel B.

Human Capital Characteristics	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic
Education				
% No High School Diploma	12.4	9.5	18.2	35.1
% H.S. Diploma	42.3	43.0	40.5	36.9
% Some College	26.4	26.6	28.8	19.8
% College Graduate or More	19.0	20.8	12.5	8.2
% Any Job Training	30.7	30.7	32.1	28.4
% H.S. or Less With Public Job Training	2.0	1.4	5.5	2.7
Years of Work Experience	8.8	9.0	7.9	8.3

Table 2, cont.

CHARACTERISTICS OF WORKING MOTHERS BY RACE AND ETHNICITY
(MEANS OR PERCENTAGES)

Panel C.

Job Characteristics	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic
Occupation				
% Full-time, Full-year	78.5	79.4	75.7	73.8
% Traditional Female	49.4	50.4	42.7	47.9
% Mixed Occupation	27.3	26.6	33.9	25.6
% Male Occupation	10.4	10.7	8.8	10.1
Industry				
% in High-tech Industry	7.7	7.7	8.4	6.7
% in High-growth Industry	12.5	12.9	10.8	11.6
% in High-tech & High-growth	1.2	1.3	0.8	0.9
% in Non-trad. Occ. + Hi-growth	1.7	1.7	1.0	1.8
% in Non-trad. Occ. + Hi-tech	1.5	1.4	1.2	2.4
Region of Country				
Northeast	18.8	19.5	17.0	14.3
Midwest	27.8	30.9	18.6	8.2
South	17.0	15.2	25.2	25.3
South Atlantic	18.3	17.0	33.3	9.8
West	18.0	17.4	5.9	42.4
% Union	16.8	16.4	19.2	17.1
Average Hourly Wage (in $)	7.58	7.81	6.69	6.42
% Earnings < $5.80	39.8	37.1	50.5	52.7

Panel D.

	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic
% Families in Poverty	4.6	2.8	14.1	8.8
N	4368	3551	489	328

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

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percent as compared to 18 percent for white and 24 percent for Hispanic mothers). Among these three groups of working mothers, black women appear most responsible, on their own, for their families' economic well-being.

Selected Human Capital Characteristics by Race and Ethnicity

Table 2, Panel B, shows the human capital characteristics of white, black, Hispanic, and all working mothers. Again, we see similarities; each group has between eight and nine years of work experience, on the average. (Black women have the least work experience and white women have the most.) There are, however, some notable differences. Hispanic women are the most likely not to have a high school diploma (35 percent as compared to 10 percent of white and 18 percent of black mothers), least likely to have had some college education (20 percent as compared to 27 percent of white and 29 percent of black mothers) and least likely to have a college degree (8 percent as compared to 21 percent for white and 13 percent for black mothers).[4] Black women are the most likely to have participated in public job training programs--6 percent of those with a high school diploma or less have participated in such programs as compared to 1 percent of white and 3 percent of Hispanic working mothers.

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[4] Although it might seem surprising that black women are more likely to have some college education (not counting those with a degree) than white women, these data are consistent with other national data sources. Data from the Current Population Survey show that, for employed women in 1987, 20.9 percent of white women, 22.1 percent of black women, and 18.6 percent of Hispanic women have some college, percentages somewhat lower that those reported here but showing the same relative levels among the race-ethnic groups (U.S. Bureau of the Census, 1988, Table 6, page 20). The major reason for the higher proportions reported here is our requirement of 600 hours of employment per year for inclusion in this study--the better educated worker is a more committed worker, so our sample has higher educational attainment than the total work force. A reason for the high representation of black women among those with some college is that they are underrepresented among those who complete college with a degree; relative to whites, lack of economic resources disproportionately interferes with their ability to complete college.

Selected Job Characteristics by Race and Ethnicity

Do these family and human capital characteristics appear to relate to the characteristics of the jobs held by each of these three groups of working mothers? A glance at Table 2, Panel C, shows no single obvious pattern or relationship, although some hints do appear.

On the basis of their family characteristics, we would expect that white mothers (who are most likely to be married to a full-time wage earning spouse) would be the least likely to be employed in a full-time, year-round job and that black working mothers (who are most likely to be their families' main breadwinner) would be most likely to be employed in full-time jobs. This assumption is not confirmed, however, and there is little variation among the three groups, with more than seven out of ten employed full-time, year-round. In fact, white working mothers are slightly more likely to be employed in full-time, year-round jobs (79 percent as compared to 76 percent of black and 74 percent of Hispanic mothers, the group least likely to have full-time, year-round jobs).

Black working mothers, however, are least likely to be employed in traditionally female jobs such as nurses, retail sales worker, hairdressers, maids, primary school teachers, and librarians (43 percent, as compared to 50 percent of white and 48 percent of Hispanic working mothers). Black working mothers are the most likely to be employed in mixed-gender occupations such as accountants, computer programmers, mail/message distributors, and packaging machine operators. They are slightly less likely to be employed in male-dominated occupations such as fire fighters, construction workers, butchers, car sales persons, pilots, engineers, physicians, and clergy, although only ten percent of all working mothers are employed in these occupations, on the average.

These three groups of working mothers are almost equally likely to be working in high tech and high growth industries. Black working mothers are about as likely to be employed in high technology industries such as research and testing services, drug manufacture, computer and data processing services, and colleges and universities, as are white and Hispanic working mothers (8 percent, 8 percent, and 7 percent, respectively). Further, black working mothers are

almost as likely as white and Hispanic mothers to be employed in high growth industries such as credit agencies, securities and commodity brokerage houses, business management and consulting services, legal services, hotels and motels, and child care services (11 percent as compared to 13 percent for white and 12 percent for Hispanic working mothers). For all three groups of working mothers, a minuscule percentage are employed in industries that are both high tech and high growth or in non-traditional jobs in high growth or high tech industries. Black working mothers are slightly more likely to be members of unions or covered by union contracts (19 percent as compared to 16 percent for white and 17 percent for Hispanic mothers).

Finally, how are these working mothers distributed among the regions of the country? White women are most likely to live and work in the Midwest (including Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, Missouri, Nebraska, and Kansas). Black women are most likely to live and work in the South Atlantic regions (including Delaware, Maryland, District of Columbia, Virginia, West Virginia, Carolina, South Carolina, Georgia, and Florida) and Hispanic women are most likely to live and work in the West (including Washington, Oregon, California, Alaska, Idaho, Montana, Wyoming, Hawaii, Nevada, Colorado, New Mexico Arizona and Utah).

How do these family, human capital, and job characteristics appear to affect the wage levels of these groups of working mothers? Although more systematic answers to these questions are provided by the findings of the regression analysis to follow, some suggestions do emerge. White working mothers have the highest average wage ($7.80 per hour as compared to $6.70 per hour for black and $6.40 per hour for Hispanic working mothers) and the lowest percentage earning less than $5.80 per hour (37 percent as compared to 51 percent for black and 53 percent of Hispanic working mothers). White working mothers' higher wage level is likely explained by their racial advantage and by their higher level of education and employment at full-time, year-round jobs. In contrast, Hispanic working mothers, who have the lowest

average hourly wage, have the least education and are the least likely to be employed in full-time, year-round jobs.

For these three groups of working mothers, what we have labelled family characteristics--marital status, presence of a full-time wage earning spouse, number and ages of children, and earnings from other family members--do not appear to consistently explain wage levels. Family characteristics do, however, bear a strong relationship to family poverty, with a perfect inverse correlation between the percentage of working mothers in each group with full-time employed spouses and the percentage of their families who are poor. Fewer than 3 percent of the families of white working mothers are poor (as defined by the U.S. Bureau of the Census) as compared to 14 percent of the families of black working mothers--who are the most likely to support children on their own. This finding could be interpreted to mean that marriage should be a major anti-poverty strategy for women. Alternatively, it can be viewed as showing the importance of learning which factors can increase women's wages so that they can be economically self-sufficient.

Selected Characteristics by Educational Level and Race and Ethnicity

Table 3, Panel A, shows little variation in the average age of these working mothers when the sample is further disaggregated by educational status as well as race and ethnicity--all groups have an average age in their mid-thirties, with white and Hispanic college women a year older than their less educated counterparts, on average. All groups of black working mothers have the same average age regardless of educational status.

There are, however, intriguing differences among these groups of mothers in terms of the number and ages of their children and their marital status. Black and white working mothers with a maximum of a high school diploma are about 5 percent less likely than their more educated counterparts to have a young child, about 3 to 4 percent less likely to have had a baby during the last year, and about 3 to 7 percent less likely to have two or more children with

Table 3.

CHARACTERISTICS OF WORKING MOTHERS BY EDUCATION LEVEL AND RACE AND ETHNICITY
(MEANS OR PERCENTAGES)

Panel A.

	Total		Non-Hispanic White		Non-Hispanic Black		Hispanic	
Demographics	H.S.	Col.	H.S.	Col.	H.S.	Col.	H.S.	Col.
Age in Years	34.2	35.3	34.3	35.5	33.9	33.9	34.2	35.3
Presence of Children								
% Child Under 6 Years	41.1	46.2	40.3	46.3	40.4	45.0	47.9	46.7
% Baby in Last Year	5.6	8.5	5.8	8.7	3.8	7.4	5.9	6.5
% 2+ Kids & 1 Under 6 Years	20.3	22.7	19.0	22.6	19.2	26.2	31.8	17.4
% Disabled	7.7	5.2	7.5	5.0	11.1	4.5	5.1	9.8
Marital Status								
% Div., Sep., Widowed During Year	2.8	1.5	2.8	1.1	2.8	3.5	3.4	3.3
% Div., Sep., Widowed	21.7	17.4	19.2	16.0	35.5	27.7	24.6	20.7
% Never Married	6.4	3.9	3.9	1.8	22.6	18.3	5.9	12.0
% Currently Married	72.9	79.8	77.9	83.6	42.9	54.0	70.8	67.4
% Married & College Graduate	---	35.8	---	38.2	---	20.8	---	25.0
% Full-time Working Spouse	59.5	65.5	63.3	68.5	34.5	43.6	59.3	57.6
% Other Family Earnings	10.4	5.0	9.1	3.9	15.2	11.8	14.0	10.3

Panel B.

	Total		Non-Hispanic White		Non-Hispanic Black		Hispanic	
Human Capital Characteristics	H.S.	Col.	H.S.	Col.	H.S.	Col.	H.S.	Col.
% No High School Diploma	22.7	---	18.1	---	31.0	---	48.7	---
% College Graduate	---	41.8	---	43.9	---	30.2	---	29.3
% Any Job Training	29.6	32.0	29.9	31.6	31.4	33.2	24.6	38.0
% HS or Less With Public Job Training	3.6	---	2.7	---	9.4	---	3.8	---
Years of Work Experience	8.4	9.4	8.6	9.5	7.1	8.9	8.1	8.6

Table 3, cont.

CHARACTERISTICS OF WORKING MOTHERS BY EDUCATION LEVEL AND RACE AND ETHNICITY
(MEANS OR PERCENTAGES)

Panel C.

	Total		Non-Hispanic White		Non-Hispanic Black		Hispanic	
Job Characteristics	H.S.	Col.	H.S.	Col.	H.S.	Col.	H.S.	Col.
Occupation								
% Full-time, Full-year	75.7	82.0	77.0	82.0	70.7	82.7	71.2	80.4
% Traditional Female	48.3	50.7	49.7	51.3	40.8	45.5	47.0	50.0
% Mixed Occupation	26.8	27.9	25.6	27.6	35.5	31.7	25.8	25.0
% Male Occupation	10.2	10.7	10.9	10.4	5.9	12.9	9.7	10.9
Industry								
% in High-tech Industry	7.2	8.3	6.9	8.6	8.7	7.9	7.6	4.3
% in High-growth Industry	11.5	13.8	12.0	13.8	8.4	14.4	11.4	12.0
% in High-tech & High-growth	0.7	1.8	0.7	1.9	0.3	1.5	0.8	1.1
% in Non-trad. Occ. + Hi-growth	1.1	2.3	1.2	2.3	0.3	2.0	1.3	3.3
% in Non-trad. Occ. + Hi-tech	1.6	1.4	1.6	1.3	0.7	2.0	3.0	1.1
Region of Country								
Northeast	19.4	18.1	19.9	19.0	20.9	11.4	14.0	15.2
Midwest	27.7	28.0	32.2	29.5	14.6	24.3	8.1	8.7
South	18.1	15.7	16.7	13.5	24.0	26.7	22.5	32.6
South Atlantic	19.1	17.4	17.9	16.1	36.9	28.2	7.2	16.3
West	15.7	20.8	13.4	21.8	3.5	9.4	48.3	27.2
% Union	14.1	19.9	14.2	18.9	13.2	27.7	14.8	22.8
Average Hourly Wage (in $)	6.24	9.19	6.41	9.35	5.53	8.33	5.77	8.08
% Earnings < $5.80	52.5	24.4	49.5	23.4	64.5	30.7	61.4	30.4

Panel D.

	Total		Non-Hispanic White		Non-Hispanic Black		Hispanic	
	H.S.	Col.	H.S.	Col.	H.S.	Col.	H.S.	Col.
% Families in Poverty	7.0	1.7	4.5	1.1	19.5	6.4	11.4	2.2
N	2388	1980	1865	1686	287	202	236	92

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

one under age six. (In contrast, Hispanic college-educated women are less likely to have two or more children with one under age six than are Hispanic working mothers with a high school education or less.) These findings cast doubt on the notion that prospective wives and mothers limit their human capital attainment; rather women who decide to invest in their human capital appear to delay, but not to forego, child bearing.[5]

Working mothers with a maximum of a high school diploma are more likely to be single or formerly married, and less likely to have a full-time working spouse than are their college-educated counterparts. (Black working mothers, regardless of educational status are more likely to be single or formerly married than are white or Hispanic working mothers, although the race and ethnic differences are not as great among those with some college education as among those with a high school diploma or less.)

On the basis of these findings, a sex-segregated model would predict that working mothers with a high school diploma--with fewer young children and fewer full-time working spouses--would have greater years of work experience, would be more likely to work full-time, and might be more likely to work in the higher paid male-dominated occupations and high tech industries. The findings shown in Table 3, Panels B and C, indicate that this is not the case. Regardless of race and ethnicity, working mothers with a maximum of a high school diploma have about a year less working experience (8 years as compared to 9 years for those with some college or more), even though they have, in theory, more years available to work when not in school. When age differences are taken into account, these two groups appear to have

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[5] A thorough examination of the relationship between decisions to invest in human capital and decisions to bear and rear children would require a long-term longitudinal data set and is beyond the scope of this study. What we can say with certainty based on the data analyzed here is that, among women who have opted for motherhood and are employed, substantial proportions, 19 percent on average, have also invested in bachelors' degrees, and an additional 26 percent have some college. They combine their high investment in their human capital with young children, recent childbirth, and employment. It should also be pointed out that investment and parenting decisions continue to be made over a number of years. A recent study by Adelman (1991), of the U.S. Department of Education, finds that women especially continue to pursue education as adults, shifting to more male-dominated fields as they age.

approximately the same number of years of work experience (black women with some college or more do have almost two additional years of work experience compared to their less educated counterparts, even though the former group are the same age). Working mothers with a maximum of a high school diploma are also less likely to be employed full-time, year-round (76 percent as compared to 82 percent of those with some college or more). As other researchers have noted, more education is correlated with stronger labor force attachment.

Education appears to have less relationship to occupation and industry characteristics. Working mothers with a high school diploma are only very slightly less likely to work in non-traditionally female occupations, high tech, or high growth industries (about a 2 percent difference) than their more educated counterparts. White working mothers with less education are slightly less likely to work in high tech industries than are their more highly educated counterparts (7 percent as compared to 9 percent, respectively), although the same is not true for black and Hispanic working mothers. Working mothers with less education are slightly less likely to work in high-growth industries (12 percent as compared to 14 percent for those with some college or more) and this is true for all race and ethnic groups. Although less educated working mothers are somewhat less likely to be employed in industries that are both high tech and high growth and in non-traditional occupations in high tech or high growth industries, an extremely small percentage of working mothers, regardless of educational status or race and ethnicity, are employed in these occupations or industries.

What is surprising is that the less educated working mothers are less likely to be union members or to be covered by a union contract than are working mothers with at least some college education (14 percent as compared to 20 percent, respectively). Black and Hispanic working mothers with at least some college education are most likely to be union members or to be covered by union contracts--likely because a higher percentage of these women work in the public sector with relatively high rates of female unionization.

What impact do these demographic, human capital, and job characteristics appear to

have on these women's wages? Working mothers with a maximum of a high school diploma, not surprisingly, have consistently lower wages than their more highly educated counterparts ($6.24 per hour as compared to $9.19 per hour, on the average). Among the former group, black working mothers receive the lowest average wages ($5.53 per hour). Among the latter, more educated group, Hispanic working mothers receive the lowest wages ($8.08 per hour). Likewise, a substantially higher percentage of those with a maximum of a high school diploma earn less than $5.80 per hour (53 percent as compared to 24 percent for those with some college or more) with black working mothers most likely to earn less than this amount. Among each race/ethnic group, the wage differences appear more explainable by human capital characteristics (e.g. education and years of work experience) and by job characteristics (e.g. percentage employed in full-time, year-round jobs) than by family characteristics. This hypothesis will be further tested in the next section.

Finally, what is the likelihood of family poverty for each of these groups of working mothers? In Table 3, Panel D, we find that black women--who are the most likely to be the main breadwinner for their families--are the most likely to live in poor families as a result, although the percentage of their families who are poor decreases substantially (from 20 to 6 percent), with the increased education of the mother. Here again, family characteristics seem to lose their salience as a predictor when human capital and job characteristics are taken into account.

Selected Characteristics by Marital Status and Race and Ethnicity

Table 4, Panel A, compares the demographic characteristics of working mothers by their race/ethnicity and martial status (except for single Hispanic mothers for whom the number in the sample--25--is too small for reliable analysis). Here, we do see notable differences among these groups of working mothers. Single mothers (never married) are younger (27.6 years of age on the average, with non-Hispanic white single mothers the youngest group at 25.9 years of

Table 4.

CHARACTERISTICS OF WORKING MOTHERS BY MARITAL STATUS AND RACE AND ETHNICITY
(MEANS OR PERCENTAGES)

Panel A.

	Total			Non-Hispanic White			Non-Hispanic Black			Hispanic	
Demographics	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Div.	Mar-ried	Sep,Div, widowed	Married
Age in Years	27.5	35.9	34.9	25.9	35.6	35.0	28.0	37.0	34.3	36.1	34.2
Presence of Children											
% Child under 6 Years	63.5	31.4	45.1	70.9	32.4	44.5	58.8	22.8	48.5	40.3	49.6
% Baby in Last Year	16.1	1.6	7.6	22.3	1.7	7.8	6.9	0.6	7.9	2.6	4.9
% 2+ Kids & 1 Under 6 Years	14.8	12.3	24.3	9.7	11.4	23.2	17.6	12.7	30.6	18.2	31.4
% Disabled	11.7	9.1	5.5	12.6	8.7	5.5	11.8	10.8	5.2	9.1	5.3
Marital Status											
% Div., Sep., Widowed During Yr	----	5.6	----	----	6.4	----	----	3.2	----	3.9	----
% Married & College Graduate	----	----	21.5	----	----	22.6	----	----	18.3	----	10.2
% Full-time Working Spouse	----	----	81.4	----	----	81.3	----	----	79.9	----	83.2
% Other Family Earnings	25.2	14.4	5.0	24.3	13.2	4.5	25.1	17.0	6.6	18.4	9.3

Panel B.

	Total			Non-Hispanic White			Non-Hispanic Black			Hispanic	
Human Capital Characteristics	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Mar.	Mar-ried	Sep,Div, widowed	Married
Education											
% No High School Diploma	20.0	15.9	11.0	21.4	9.4	9.1	17.6	26.6	12.7	46.8	32.3
% H.S. Diploma	46.1	44.2	41.5	49.5	47.7	41.7	46.1	38.0	39.7	28.6	40.3
% Some College	28.3	27.0	26.1	24.3	27.5	26.5	31.4	26.6	29.3	23.4	17.3
% College Graduate	5.7	13.0	21.5	4.9	15.4	22.6	4.9	8.9	18.3	1.3	10.2
% Any Job Training	35.7	34.0	29.4	33.0	34.7	29.7	39.2	34.8	27.1	27.3	28.3
% HS or Less With Public Job Train	6.1	3.2	1.3	4.9	2.5	1.0	8.8	5.7	3.9	3.9	2.7
Years of Work Experience	5.8	9.5	8.9	5.9	9.6	9.0	5.5	9.2	8.0	8.8	8.3

Table 4, cont.

CHARACTERISTICS OF WORKING MOTHERS BY MARITAL STATUS AND RACE AND ETHNICITY
(MEANS OR PERCENTAGES)

Panel C.

	Total			Non-Hispanic White			Non-Hispanic Black			Hispanic	
Job Characteristics	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Div.	Mar-ried	Sep,div, widowed	Married
Occupation											
% Full-time, Full-year	66.1	80.6	78.9	64.1	81.1	79.5	66.7	79.1	77.3	79.2	72.1
% Traditional Female	45.7	46.5	50.4	48.5	47.5	51.2	38.2	43.0	44.5	45.5	46.9
% Mixed Occupation	26.5	28.1	27.2	21.4	26.9	26.7	38.2	32.3	33.2	29.9	27.0
% Male Occupation	7.8	12.5	10.0	9.7	12.4	10.3	4.9	13.3	7.4	11.7	9.3
Industry											
% in High-tech Industry	7.0	7.2	7.9	5.8	8.4	7.6	8.8	4.4	10.9	2.6	8.4
% in High-growth Industry	10.0	13.5	12.5	15.5	14.0	12.5	5.9	11.4	12.7	14.3	11.5
% in High-tech & High-growth	0.4	1.0	1.3	1.0	1.3	1.3	----	----	1.7	1.3	0.9
% in Non-trad. Occ. + Hi-growth	0.9	3.0	1.4	1.9	3.3	1.4	----	1.3	1.3	3.9	1.3
% in Non-trad. Occ. + Hi-tech	2.2	1.4	1.5	2.9	1.6	1.3	1.0	0.6	1.7	1.3	2.7
Region of Country											
Northeast	21.3	20.3	18.3	24.3	21.0	19.0	21.6	17.1	14.9	20.8	12.8
Midwest	23.0	25.5	28.8	29.1	29.3	31.4	21.6	17.7	17.9	10.4	8.0
South	17.8	17.5	16.9	10.7	15.7	15.2	20.6	24.1	27.9	18.2	26.5
South Atlantic	22.2	18.2	18.1	14.6	14.6	17.7	29.4	34.8	34.1	13.0	7.1
West	15.7	18.6	18.0	21.4	19.4	16.8	6.9	6.3	5.2	37.7	45.6
% Union	13.9	19.0	16.4	5.8	17.2	16.6	21.6	23.4	15.3	24.7	14.6
Average Hourly Wage (in $)	5.87	7.53	7.71	5.74	7.93	7.85	6.04	6.59	7.04	6.16	6.59
Earnings < $5.80	59.1	40.0	38.3	61.2	35.5	36.6	54.9	51.9	47.6	53.2	50.9

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Table 4, cont.

CHARACTERISTICS OF WORKING MOTHERS BY MARITAL STATUS AND RACE AND ETHNICITY
(MEANS OR PERCENTAGES)

Panel D.

	Total			Non-Hispanic White			Non-Hispanic Black			Hispanic	
	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Div.	Mar-ried	Nev. Mar.	Sep, Div.	Mar-ried	Sep,Div, widowed	Mar-ied
% Families in Poverty	17.4	12.5	1.6	13.6	8.3	1.2	20.6	24.7	3.9	22.1	3.1
N	230	864	3274	103	629	2819	102	158	229	77	226

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Note: Never Married Hispanics are not included as a result of their small sample size.

age) and formerly married women are on the average about one year older (35.9 years of age, with black working mothers the oldest at 37.0 years of age) than currently married women (with an average age of 34.9 years).

These age differences most likely result in the differences we see among these groups in terms of the number and ages of their children. Single working mothers are the most likely to have a child under age six (64 percent as compared to 31 percent for formerly married and 45 percent for currently married women), and the most likely to have had a baby in the last year (here, surprisingly, given the press attention to black out-of-wedlock births, single white working mothers were significantly more likely to have given birth than single black working mothers, 22 percent as compared to 7 percent, respectively). Single working mothers are, however, less likely to have two or more children (with one under age six) than are currently married working mothers, although they are almost as likely to have this number of children as are formerly married women (15 percent as compared to 24 percent and 12 percent, respectively). Of all working mothers, Hispanic married women are the most likely to have two or more children with one under age six. Single working mothers are most likely to report a disability that makes it difficult to hold a job (12 percent as compared to 9 percent for formerly married and 6 percent for currently married working mothers). And finally, single mothers live in families where one quarter of the family earnings are from additional earners, aside from a spouse (as compared to 14 percent for formerly married and 5 percent for currently married working mothers). These differences most likely reflect the higher percentage of single working mothers who are still living with their family of origin.

Single working mothers are the most likely to lack a high school diploma and married women are the most likely group to have graduated from college (although Hispanic women are the least likely to possess a college degree regardless of marital status and non-Hispanic white women are the most likely). Not surprisingly, single working mothers have fewer years of work experience (5.8 years as compared to 9.5 years for formerly married and 8.9 years for currently

married working mothers). Age, rather than marital status, appears to be the salient predictor here--with the oldest group, in general, having the most work experience. Single working mothers are more likely, however, to have participated in job training programs. This is especially true for black single working mothers; 39 percent have participated in these programs compared to 33 percent of their white counterparts. These findings may reflect the targeting policies of these programs.

How do these family and human capital characteristics appear to affect the jobs and earnings of these different groups of working mothers? The findings suggest that there is no single relationship between working mothers' marital status and the characteristics of their jobs. If there were a single relationship, we would expect married women (who can more likely depend on the earnings of another breadwinner) to be the least likely to work full-time, year-round. In fact, single working mothers are the least likely to do so (66 percent), while formerly married working mothers are very slightly more likely than currently married working mothers to be employed in these jobs (81 percent as compared to 79 percent, respectively; with Hispanic married mothers the least likely of all married working mothers to be employed full-time, year-round).

Single working mothers are about as likely to work in traditionally female occupations as are formerly married women, with currently married women the most likely to hold these kinds of jobs (46 percent as compared to 47 percent and 50 percent, respectively), but the differences are small. A second look at the data contained in Table 4, Panel C, suggests, however, that race may provide an equally meaningful explanation for mothers' occupational participation--regardless of marital status, black working mothers are less likely than are non-Hispanic white working mothers to be employed in traditionally female occupations. This general pattern is repeated in terms of participation in high growth industries. Single working mothers are least likely to be employed in high growth industries and formerly married working mothers are most likely to be employed in these industries (10 percent and 14 percent, respectively). But here it

is non-Hispanic white women who are, on the average, more likely to be employed in this set of industries. In contrast, employment in high tech industries does not appear to vary by marital status; currently married women are only slightly more likely to be employed in these industries (8 percent as compared to 7 percent for formerly married women and single women), with no consistent patterns by race and ethnicity.

And finally, formerly married working mothers are the most likely and single working mothers are the least likely to be in jobs covered by union contracts (19 percent as compared to 14 percent, respectively). In general, single and formerly married black and formerly married Hispanic women have higher rates of union membership than do their non-Hispanic white counterparts--although the reverse is true for married women.

What impact do these family, human capital, and job characteristics appear to have on the earnings of these groups of working mothers? Not surprisingly, single working mothers have the lowest average hourly wages ($5.87 per hour) and the highest percentage earning less than $5.80 per hour (59 percent). These low earnings can be attributed to their demographic, human capital, and job characteristics--including their younger age, their greater likelihood of having young children, their lack of college education, and their fewer years of work experience. The results are less clear for formerly and currently married working mothers. Currently married working mothers earn higher wages, on the average, than their formerly married counterparts ($7.71 per hour as compared to $7.53 per hour, respectively) and are slightly less likely to earn under $5.80 per hour (38 percent as compared to 40 percent), but these findings vary across race and ethnic groups. Among non-Hispanic white working mothers, married women earn lower wages than formerly married working mothers, but the reverse is true for black and Hispanic working mothers. This finding suggests that there is no consistent relationship across race/ethnic groups between marital status and wages, again suggesting the importance of non-family characteristics for explaining working mothers' earnings.

The importance of a husband's earnings for reducing family poverty can be seen in Table

4, Panel D. Single working mothers' families are the most likely to be poor (17 percent), married women's families are least likely to be poor (only 2 percent), with the families of formerly married women closer to those of single women (13 percent). Among black working mothers, formerly married women are more likely than are single women to live in poor families (25 percent as compared to 21 percent, respectively). This higher poverty rate for formerly married black working mothers is likely due to the lower percentage of family income from other earners (17 percent of earnings as compared to 25 percent of earnings for black single working mothers).

Summary of Findings on the Characteristics of Working Mothers

In the descriptive findings presented above, we find variation among different race\ethnic groups of working mothers. We also find that what we have labelled as family characteristics do not consistently describe mothers' human capital, job characteristics, or wages. Although marital status accounts for some difference--formerly married mothers are slightly more likely to hold full-time jobs and to hold jobs that are covered by union contracts than are currently married mothers, when race is held constant, the differences are small (about two percentage points). The data suggest that wage and job differences may be most strongly associated with differences in educational level among race and ethnic groups. The findings further suggest that educational level (a human capital variable) is *not* consistently related to family characteristics. For example:

- Working mothers with higher levels of education are more, not less, likely to have a young child, indicating that women do not appear to limit their human capital if they expect to have children, and that, having decided to invest in their human capital, they most likely delay rather than forego having children;
- Controlling for age, years of work experience are equal for formerly married and currently married women, indicating that the presence of a spouse does not appear to affect work patterns;
- Black working mothers, regardless of marital status, are more likely to work in non-traditionally female jobs, indicating that race may be a more significant factor than

marital status in explaining occupational participation;

- White currently married working mothers (especially those with college education) earn the highest wages, higher than those of white formerly married women or than those of black women regardless of marital status. These patterns indicate that work/family conflicts alone are not determinative of wage levels. Wages also may reflect employer discrimination based on race and ethnicity or the ability of white women to afford the additional education that employers desire. In addition, for white women, the availability of another adult--a spouse--to help with family care responsibilities may actually enable married mothers to accept higher wage jobs.

These findings suggest a more complex set of relationships between family, human capital, job characteristics, and race and ethnicity than a simple sex-segregated, gender-based model of market behavior would suggest.

In summary, we suggest that family characteristics are not the most salient predictors of working mothers' earnings, although they appear to be important for predicting poverty rates for the families of working women. In the next section, we systematically isolate and compare all of these characteristics and determine their relative influence on a working mother's ability to earn a wage sufficient to support herself and her family.

THE IMPACT OF FAMILY, HUMAN CAPITAL, AND JOB CHARACTERISTICS ON HOURLY WAGES

What factors have the most important impact on the wages of different groups of working mothers? Do marital status and presence of children negatively affect wages? How does investment in human capital affect wages? Who benefits and who loses from factors associated with economic restructuring--employment in high tech and high growth industries and in non-traditional occupations, employment in unionized jobs, employment in different regions of the country, and in full or part-time jobs?

In order to isolate and compare the relative importance of human capital, job and family characteristics for different groups of working mothers, we next present the results of an ordinary least squares (OLS), step-wise regression analysis with the natural logarithm of wages as the dependent variable. The transformation of wages into their natural logarithm is typical in wage regression analysis because the resulting transformation more closely follows a linear

function necessary for OLS models. Hence, such a model provides more accurate and reliable results than a model that uses actual wages as the dependent variable.

We use a step-wise regression model--a method that enters each variable into the model on the basis of its additional explanatory value (after adjusting for the variables already in the model) until there is no further gain in increasing the explanatory power of the equation (as measured by the square of the multiple correlation coefficient, R^2)--to determine the order of importance of each of the independent variables for each of the groups of working mothers. In the tables below, the independent variables are listed in their order of importance in the model.

The independent variables included in the models are, by and large, the same variables used in the descriptive analysis presented above. The variable names used in the model, and the definition of each variable, are shown in Chart 2.

Since we are interested in examining the marginal effect of each of the independent variables in terms of its return in dollars, other factors being equal, we transformed the coefficients resulting from the regression equations (beta values) using the following technique. We evaluate the antilog of the model at the mean values of the independent variables and then measure the marginal effect of each independent variable separately. That is,

$$d(\text{wage})/dx_i = d[\text{EXP}(\text{model})]/dx_i = B_i * \text{EXP}(\text{model}),$$

where $d(\text{wage})/dx_i$ is the marginal change of wages with respect to the change in the ith factor, B_i is the estimated coefficient of the ith factor, and EXP(model) is the antilog of the estimated logarithm wage model using the mean values of the independent factors. As a result of this transformation, the results can be interpreted similarly to the regression coefficients of a linear regression model. We compared the results and found that the coefficients and the transformed coefficients are very similar in terms of significance levels, direction and magnitude. The only noticeable changes occurred with the largest coefficients (such as college education) which were

Chart 2.

DESCRIPTION OF THE INDEPENDENT VARIABLES
IN THE STEPWISE REGRESSION MODELS

Family Characteristics

NEVMAR:	Never married seven months or more of the twelve month period
NEVMBABY:	Never married and had a baby during the year
SPFTIME:	Lives with a full-time working spouse
BABY:	Birth of a child during the year
MOREYON:	Two or more children with one under six years old
PROOTHER:	Proportion of family earnings which come from other than self or spouse
MAREDUC:	Married and a college graduate

Human Capital Characteristics

COLLEGE:	At least a college graduate
SOMECOL:	Has some college but not a college degree
HS:	High School graduate
JOBTR:	Received any job training
EXPER:	Total work experience from wave 2 from topical module
ESTEXP:	A dichotomous variable with (1) = estimated respondent's experience for those with missing values and (0) = not necessary to estimate respondent's experience because value was available

Job Characteristics

FULLTIME:	Full-time = 35 or more hours per week and full-year = 11 months or more
MALEOCC:	Occupation with less than 30% women
MIXOCC:	Occupation with 30% to 70% women
HITECH:	High-tech industry--more than average Research & Development
GROWLEV:	High-growth industry--over 30% growth in that industry over a 5 year period
NTRDGROW:	Non-traditional occupation (male-dominated or mixed) in a high-growth industry
UNION:	Union member or coverage by union contract

Region of Country

MIDWEST:	Includes Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, Missouri, Nebraska, Kansas
WEST:	Includes Washington, Oregon, California, Alaska, Idaho, Montana, Wyoming, Hawaii, Nevada, Colorado, New Mexico, Arizona, Utah
SOUTH:	Includes Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas
SATLANT:	South Atlantic includes Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida
*NORTHEAST:	Includes Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, New Hampshire, Vermont, Maine

*The wages of this region are the the benchmark against which all other regional wages are compared.

reduced in magnitude slightly in the natural logarithm model.[6]

The models were first estimated for all working mothers in the sample and then separately for working mothers by race and ethnicity. Then, because of the importance of the interaction effects between educational level and the other independent variables, separate models were estimated for those working mothers with a high school diploma or less and for those with some college or more. The results (in terms of the dollar benefits and losses attributable to each wage-related factor and the order of importance of each of the factors) for all working mothers and for black, white and Hispanic working mothers are presented in Table 5.[7]

Findings for All Working Mothers

The results show that for working mothers, as a group, a combination of human capital and job characteristics significantly increases their hourly wages. The top wage-increasing factors include: (1) obtaining a college degree; (2) having some years of college education; (3) working full-time/year-round; (4) having more years of work experience; (5) working in a job covered by a union contract; (6) and obtaining a high school diploma (for those without a college education).[8] These six most important factors (three of which are education-related) are followed by three industrial and occupational characteristics: (1) employment in a high-tech industry (relative to all other industries); (2) employment in a male-dominated occupation; or (3) employment in a mixed-gender occupation (relative to employment in a female-dominated

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[6] Since this method of estimating the marginal change of each factor depends on the values of the independent variables, the estimates are most accurate for those values closest to the mean.

[7] The results of the full regression model are provided in the Appendix Tables 4 and 5 which include and present the significance of all the independent variables in Chart 2.

[8] The omitted education level is less than high school completion, so that the wage effects of all education levels are relative to the wages of those mothers without high school diplomas.

Table 5.

RETURNS OR LOSSES IN ADDITIONAL HOURLY WAGES FOR FACTORS THAT HAVE A SIGNIFICANT EFFECT ON WAGES, BY RACE AND ETHNICITY

(Step-Wise Regression Model in Order of Entry into Model)

	All Mothers (n=4352)		Non-Hispanic White Mothers (n=3535)		Non-Hispanic Black Mothers (n=488)		Hispanic Mothers (n=327)	
Order	Factor	$ Value	Factor	$ Value	Factor	$ Value	Factor	$ Value
1	COLLEGE	3.87***	COLLEGE	3.83***	COLLEGE	4.37***	MAREDUC	2.07
2	FULLTIME	1.24***	EXPER	.07***	UNION	1.01***	FULLTIME	1.17***
3	EXPER	.07***	FULLTIME	1.26***	FULLTIME	.99***	UNION	1.42***
4	SOMECOL	2.28***	SOMECOL	2.33***	SOMECOL	2.15***	EXPER	.06***
5	UNION	1.09***	UNION	1.05***	HS	1.32***	SOUTH	-1.71***
6	HS	1.29***	HS	1.25***	EXPER	.05***	SOMECOL	1.69***
7	HITECH	1.04***	HITECH	1.10***	SOUTH	-1.78***	HS	1.42***
8	MALEOCC	.95***	MALEOCC	1.00***	SATLANT	-1.35***	HITECH	1.51***
9	MIXOCC	.64***	MIXOCC	.65***	ESTEXP	.65**	MIDWEST	-1.78***
10	PROOTHER	-.01***	MIDWEST	-.74***	HITECH	.61	MOREYON	-.68**
11	SOUTH	-.87***	PROOTHER	-.01***	PROOTHER	-.01**	WEST	-.67**
12	MIDWEST	-.75***	ESTEXP	.53***	MIXOCC	.65***	MIXOCC	.68**
13	SATLANT	-.56***	JOBTR	.39***	MALEOCC	.94***	COLLEGE	2.29**
14	ESTEXP	.52***	SOUTH	-.67***	MIDWEST	-.91***	PROOTHER	.01*
15	JOBTR	.32***	SATLANT	-.52***	GROWLEV	-.63*	NTRDGROW	2.11**
16	BLACK	-.42***	NTRDGROW	.70*	WEST	-.76		
17	NTRDGROW	.66*						
18	HISPANIC	-.27						
Mean Hourly Wage	$7.58		$7.81		$6.69		$6.42	
R2	.3070		.2830		.4239		.3988	

*** Significant at the .01 level

** Significant at the .05 level

* Significant at the .10 level

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

69

occupation). The remaining variables that are significant in increasing working mothers' wages are the estimated experience variable (which is a crude indicator of the importance of experience for those with missing information on their actual years of work experience), participation in a job training program, and employment in a non-traditional job in a high growth industry. Employment in a high growth industry by itself is not significant and, as we saw earlier, a very small percentage of working mothers are employed in non-traditional jobs in high growth industries.

The dollar returns to these factors range from a low of 7 cents per hour for every year of work experience to a high of $3.87 per hour for obtaining a college degree (relative to the earnings of those who have not completed high school). Most of the returns to job characteristics are in the $1.00 per hour range. Employment in a full-time, year-round job results in an additional $1.24 per hour, union membership an additional $1.09, employment in a high tech industry an additional $1.04, and employment in a male-dominated occupation an additional 95 cents per hour (relative to employment in a female-dominated occupation). For working mothers, obtaining a college degree is most important in the model and has, by far, the strongest impact on wages. In contrast, years of work experience, although the third most important factor in the model, has relatively little impact on working mother's wages. For example, it would take more than 15 years of work experience to gain the benefit equivalent to being a member of a union and almost 14 years of experience to gain the benefit equivalent to working in a male-dominated occupation. Table 5 also shows the negative impact of working in the low-wage Southern region of the country (minus 87 cents per hour for the South and minus 56 cents per hour for the South Atlantic relative to the wages in the Northeast) and in the deindustrializing Midwest (minus 75 cents per hour relative to the Northeast). Not surprisingly, given our previous findings concerning racial and ethnic inequalities in earnings, we find that black working mothers lose an average of 42 cents per hour and Hispanic working mothers lose an average of 27 cents per hour compared to their white counterparts, all other factors being

equal (although the figure for Hispanics is not statistically significant).

Where are the family characteristics in this model? With one exception, they are not significant and are not selected in the step-wise procedure for determining the "best" model. The only family characteristic that is included, the percentage of family income earned by other family members aside from a spouse (PROOTHER), goes in the expected direction with working mothers earning about one cent less per hour for every additional percent of earnings from other family members. (As we saw earlier, it is the younger, single mothers who are the most likely to live in families with a high percentage of earnings from other family members, possibly their parents.) The remaining family variables--presence of a full-time working spouse, number and ages of children, and marital status--do not significantly affect earnings per se and do not enter the model (indicating that they do not increase its explanatory ability). The lack of significance of these variables indicates that working mothers do not appear to systematically forego higher wages based on their increased family responsibilities. The model shows that for working mothers, as a group, wages are best predicted by human capital and job characteristics rather than by family responsibilities.

Findings for Non-Hispanic White Working Mothers

Since non-Hispanic white working mothers are 79 percent of the sample, their characteristics are best reflected in the all working mothers' model and, as Table 5 shows, there are few differences between these two models (non-Hispanic white working mothers and all working mothers). The importance of years of experience increases in the white working mothers' model, although the returns remain low (at 7 cents for each year). White working mothers' returns for high school and college degrees are slightly lower than for all working mothers, although returns for some college are greater. White working mothers' returns for working in male-dominated occupations, for working in a high-tech industry, for participation in job training, and for working in a non-traditional job in a high growth industry are slightly higher

than for working mothers as a whole. They lose about the same amount in hourly earnings if employed in the Midwest and somewhat less if employed in the South. Here again, family characteristics are insignificant, with the same single exception as in the all working mothers' model--the percentage of family income earned by family members other than a spouse. Factors such as marital status, presence of a full-time working spouse, and number and ages of children do not enter the model. These findings indicate that family responsibilities are not important predictors of white working mothers' wages and that these mothers do not appear to systematically trade-off higher wages for time to fulfill their family responsibilities.

Findings for Non-Hispanic Black Working Mothers

As with their white counterparts, the six most important factors for predicting increased wages for non-Hispanic black working mothers are: (1) obtaining a college degree; (2) coverage by a union contract (the second most important factor for black working mothers while it is the fifth most important factor for all working mothers as a group and for white working mothers); (3) employment in a full-time, year-round job; (4) having some college education; (5) obtaining a high school diploma for those without college education; (6) and having more years of work experience. The returns in hourly earnings to a high school and college diploma are slightly higher for black working mothers, and the returns to experience and job characteristics (union and full-time) are slightly lower than for their white counterparts.

There are some important differences between black and white working mothers in the returns and losses that result from the remaining significant factors in the model. Working in the South--with its legacy of racial discrimination--is, not surprisingly, more important in explaining decreases in black working mothers' earnings. Black working mothers lose more than twice as much as white mothers in hourly earnings as a result of employment in this region of the country (minus $1.78 for black compared to minus 67 cents for white mothers, when all other factors are held constant). Black working mothers gain only about half the returns for

working in a high-tech industry (61 cents as compared to $1.10 for white working mothers, when all other factors are held constant), and this factor is not significant for black working mothers. And black working mothers actually lose earnings for working in high-growth industries (at the rate of 63 cents per hour--although this finding is significant only at the .10 level). Black and white working mothers receive about the same hourly wage benefit from working in male-dominated or mixed-gender occupations.

We have already seen the relative unimportance of family characteristics in predicting the wages of working mothers as a whole. For black working mothers, these family relations are likewise unimportant in explaining wage levels. As with white mothers, the only family characteristic that enters the model is the percentage of family earnings from other family members aside from a spouse. This factor reduces black working mothers' earnings by less than one cent per hour for every additional percent of income from other earners. None of the other family characteristics--marital status, presence of a working spouse, or number and ages of children--enter the model. Thus, black working mothers--the group most likely to be their families' major breadwinner--do not appear to systematically accept lower wages as a result of their family responsibilities.

Findings for Hispanic Working Mothers

There are some important differences between the findings for Hispanic working mothers and the findings for non-Hispanic white and black working mothers. First, the benefits and losses from job characteristics for Hispanic working mothers differ from those of black and white working mothers. Hispanic working mothers gain more from coverage by a union contract, obtaining a high school diploma, and employment in high-tech industries than do their non-Hispanic white and black counterparts. They also gain more from employment in a non-traditional occupation in a high growth industry ($2.11 per hour in contrast to white working mothers who gain only 70 cents per hour), but they appear to gain less from some college

college education. Hispanic working mothers lose about the same as non-Hispanic black working mothers for working in the South (minus $1.71 per hour as compared to minus $1.78 for black working mothers), but they lose substantially more for working in the Midwest (minus $1.78 as compared to minus 91 cents for black and minus 74 cents for white working mothers). In the West (the region where they are the likeliest to live and work), Hispanic mothers lose 67 cents per hour as compared to minus 76 cents for non-Hispanic black working mothers. (Non-Hispanic white working mothers do not lose earnings for employment in this region of the country.)

Second, the returns and losses to family characteristics indicate similarities as well as differences between Hispanic and non-Hispanic working mothers. As with both black and white working mothers, Hispanic mothers' wages are negatively affected by the percentage of family earnings from other family members--about a one cent per hour decline for every additional percentage of earnings coming from others. But unlike non-Hispanic white or black working mothers, Hispanics are the only group for whom marriage along with a college degree--as opposed to a college degree alone--is entered into the model. Although it is not significant, it is the factor that explains the most variation. Hispanic mothers also appear unique in that the presence of two or more children, with at least one under age six, is significant (at the .05 level) in the model. For Hispanic women, the presence of young children does lower wages, decreasing them by 68 cents per hour. The implications of these findings are that family characteristics appear to be more important for Hispanic women and that family responsibilities, in the form of two or more children with one under age six, do have a negative impact on their wages.

Findings by Educational Level

We have seen the importance of obtaining a college degree for the earnings of all groups of working mothers. Yet, more than half of the working mothers in this sample (55 percent)

Table 6.

RETURNS OR LOSSES IN ADDITIONAL HOURLY WAGES
FOR FACTORS THAT HAVE A SIGNIFICANT AFFECT ON WAGES, BY EDUCATION LEVEL

(Step-Wise Regression Model in Order of Entry into Model)

All Mothers (n=4351)				
	High School or Less		Some College or More	
Order	Factor	$ Value	Factor	$ Value
1	EXPER	.05***	COLLEGE	1.90***
2	FULLTIME	.99***	FULLTIME	1.56***
3	HS	1.13***	EXPER	.10***
4	UNION	1.19***	MIXOCC	1.04***
5	HITECH	1.01***	MALEOCC	1.61***
6	SOUTH	-.87***	UNION	.98***
7	MALEOCC	.65***	PROOTHER	-.03***
8	JOBTR	.33***	HITECH	1.08***
9	MIXOCC	.36***	ESTEXP	.74***
10	BLACK	-.42***	MIDWEST	-.93***
11	ESTEXP	.38***	SOUTH	-.81***
12	MIDWEST	-.56***	SATLANT	-.53**
13	SATLANT	-.51***		
14	PROOTHER	-.01***		
15	GROWLEV	.30**		
16	SPFTIME	-.18*		
Mean Hourly Wage	$6.24		$9.19	
R2	.2103		.2367	

*** Significant at the .01 level

** Significant at the .05 level

* Significant at the .10 level

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

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have a high school diploma or less. In this study, we are particularly interested in isolating the factors that increase the earnings of this less educated group of working mothers, whose average wage is almost $3.00 less per hour than their college educated counterparts, who are more than twice as likely to earn below a sufficiency level wage, and whose families are more than four times as likely to be poor. In Table 6, we compare the returns and losses in additional hourly wages of those working mothers with a high school diploma or less to those with some college or more.

Working Mothers With High School Diplomas or Less

For working mothers with a high school diploma or less, five factors are most important for increasing their earnings. These are: (1) years of work experience (5 cents per year); (2) employment in a full-time, year-round job (99 cents per hour); (3) obtaining a high school diploma ($1.13 per hour); (4) membership in a union or coverage by union contract ($1.19 per hour); and (5) working in a high tech industry ($1.01). Of somewhat less benefit to these women are: working in a male-dominated occupation (65 cents per hour); working in a mixed-gender occupation (36 cents per hour); participating in a job training program (33 cents per hour); and working in a high-growth industry (30 cents per hour). As we have seen from the previous findings, these benefits are not likely to be equally distributed by race and ethnicity.

As with all working mothers, less educated mothers lose wages by working in the low-wage South and South Atlantic states (minus 87 and minus 51 cents per hour, respectively) and the deindustrializing Midwest (minus 56 cents per hour). Black working mothers with a high school diploma or less lose an additional 42 cents per hour, when other factors are equal, as a result of their race.

Family characteristics have a limited impact on these women's earnings. As with the other groups, the percentage of family earnings from other members aside from spouses has a small negative impact (about one cent per hour for every percent of earnings). Those living in

families with a high percentage of earnings from other family members are more likely to be younger, single women who may still be living with their parents, as we have previously noted. Marriage to a full-time working spouse has a very limited impact (minus 18 cents per hour, significant at the .10 level), and number and ages of children do not enter into the model at all.

Working Mothers with Some College or More

For working mothers with some college education, possession of a college diploma is the most important factor for increasing their earnings ($1.90 per hour), followed by employment in a full-time, year-round job, ($1.56 per hour), and having more years of work experience (10 cents per hour for each year of experience, a much bigger return than for those mothers with a high school diploma or less). For these more highly educated working mothers, employment in a male-dominated job results in more than double the hourly returns of mothers with less education ($1.61 per hour as compared to 65 cents, respectively) and is more important in the model. This finding is hardly surprising given that the male-dominated occupations for which a college degree is a gateway are among the highest paid occupations in the U.S. (e.g. engineering, law, medicine, dentistry). College educated women also benefit significantly ($1.04 per hour) from employment in mixed-gender occupations in contrast to their less educated counterparts (who gain only 36 cents per hour). Both groups of working mothers benefit relatively equally from employment in a high-tech industry ($1.08 for those with some college or more compared to $1.01 for those with a high school diploma or less). Working mothers with some college benefit somewhat less from union membership (98 cents as compared to $1.19 for those with a high school diploma or less), although they are more likely to be unionized. As with their less educated counterparts, college educated working mothers lose earnings by being employed in the low-wage South and the deindustrializing Midwest (where they lose more per hour), although these factors are less important in the model.

Family characteristics appear to have almost no impact on college educated working

mothers' earnings. The only exception is the percentage of family earnings from other family members, which results in a decline of about three cents per hour for each additional percent of earnings--the highest of any group. It is also the case, however, that this group of working mothers are the least likely to live in families with additional wage earners other than a spouse (only 5 percent do).

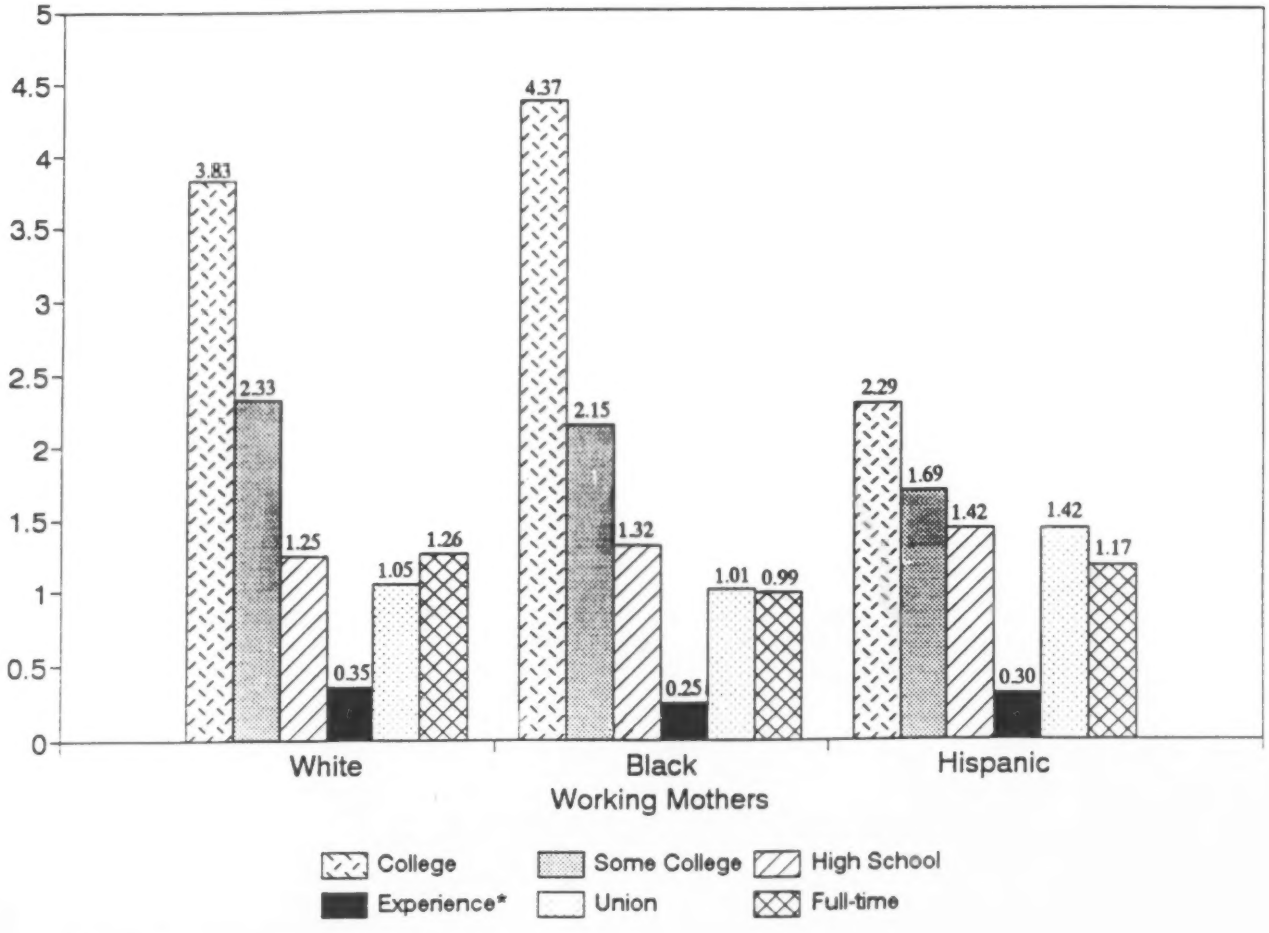
Summary of Findings from the Multivariate Analyses

As women's wages become more important for families' and especially for children's well-being, our findings indicate that a substantial percentage of working mothers (40 percent) do earn less than a sufficiency wage. But our findings also indicate that working mothers do not appear to systematically or consistently forego higher wages as a result of their involvement in marriage or child rearing. Those with a husband or two or more children with one under six are often more likely, not less likely, to gain higher wages. These findings strongly suggest that women do not, as a sex-segregated analysis would suggest, need to remain single or childless to raise their wages, or alternatively, to forsake sufficient wages and depend on the earnings of a male breadwinner in order to have children. Instead, our findings suggest that the same factors that raise men's wages--human capital and job characteristics--appear to be most important for raising working mothers' earnings.

The most important factors for increasing the wages of non-Hispanic white and black and Hispanic working mothers are shown in Chart 3. They are: education; employment in a full-time, year-round job; union membership; and years of work experience. As we saw, these factors are followed by three industrial and occupational characteristics--employment in a high tech industry or employment in a male-dominated or mixed-gender occupation. Employment in the low-wage South and deindustrializing Midwest significantly lowers wages, especially for black working mothers.

CHART 3
MOST IMPORTANT FACTORS
THAT INCREASE WAGES OF WORKING MOTHERS

Dollar Per Hour Return



*Five Years of Work Experience

Source: IWPR calculations based on the 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Note: Although MAREDUC (the interaction variable indicating married with college degree) explained the most variation in the hourly wages of Hispanic mothers in the step-wise regression, it was not significant and is not included in the chart. Therefore, the college variable alone, which was significant, is included in the chart; its smaller effect relative to non-Hispanic black and white mothers is almost certainly due to the large effect of MAREDUC.

Overall there is little evidence (with the possible exception of Hispanic working mothers) that family characteristics have a significant impact on working mothers' wages--that in the anticipation or actuality of marriage or motherhood, women limit their human capital or their participation in full-time, high tech, unionized, or male-dominated jobs.[9] The focal implication of this research is that policies to increase wages should be directed toward human capital attainment and the characteristics of jobs. The estimated impact of such policy changes is the subject of the next section.

ESTIMATED IMPACT OF POLICY STRATEGIES FOR INCREASING MOTHER'S WAGES AND REDUCING FAMILY POVERTY

What changes or policy shifts affect the most working mothers? Which changes or policy shifts are the most effective as a sufficiency wage strategy? And for which race/ethnic groups? Which changes or policy shifts are most effective as wage mobility strategies for working mothers at different levels in the wage distribution, and how does this vary by race/ethnicity? How effective are these policies in bringing the families of these working mothers out of poverty?

Our research illustrating the variation in work and earnings patterns among working mothers indicates that those with the greatest family care responsibilities do not forgo higher wages uniformly or systematically. The findings further suggest that their wages, just as men's

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[9] It should be noted, however, that the sample for this study is limited to relatively committed workers--mothers working at least 30 percent of full-time over the course of a year. Thus, for committed working mothers, family responsibilities have little impact on hourly wage levels. Family-related variables may have greater impact, however, on these mothers' labor supply (the number of hours they work per year). These variables may also have a larger impact on the wages of mothers excluded from the study, those not working at all or working fewer that 600 hours per year. Nevertheless, despite the exclusion from the study of those mothers for whom family characteristics may make a greater difference, the findings for the mothers in this study remain significant. For these mothers, family responsibilities have little impact on their hourly wages.

wages, are best analyzed in terms of the characteristics of the jobs in which they are employed as well as their human capital. In the previous section, we saw that a series of specific job and human capital characteristics increased working mothers' wages, on the whole. Not all of these factors worked equally well for white, black, and Hispanic working mothers. For example, black working mothers gained a higher premium than white mothers from investment in college education, but a lower premium for almost all other factors. Employment in a male-dominated occupation is not a statistically significant factor in increasing Hispanic mothers' wages, and participation in job training is statistically significant only for white mothers. Black mothers lost earnings as a result of their race, when other factors were held constant, and lost the most as a result of employment in the South.

Based on the findings from the multivariate analyses, we next model and test the impact of a series of policy changes that are likely to have a positive impact on working mothers' wages. We analyze the impact of these policy changes with three policy goals in mind, expecting that not all policies will have an equal impact in achieving all goals: 1) improving the ability of mothers to earn a sufficiency wage ($5.80 in 1987 dollars), because a wage at this level, if worked full-time, year-round, would enable most mothers to survive above poverty on their own; 2) improving wages for those working mothers earning less than 150 percent of a sufficiency wage, because at low earnings, any amount of improvement can be very worthwhile; and 3) improving mothers' wages enough to move poor families out of poverty.

We estimate the impact of the following specific policy changes: increasing working mothers' educational levels; increasing the percentage of mothers in full-time, year-round jobs; increasing the returns working mothers gain for their years of experience; maximizing their years of experience; increasing both returns and experience; increasing working mothers' coverage by union contracts; increasing the percentage of working mothers employed in high-tech firms; increasing the percentage of working mothers employed in male-dominated occupations; increasing the level of wages for all regions of the country to the level in the Northeast region;

increasing the percentage of working mothers with job training; decreasing race-based earnings differentials; and finally, a combination of three policies--increasing the percentage of mothers in full-time, year-round jobs along with maximizing their years of work experience and equalizing the returns they gain for these years of work experience to those gained by white men. Chart 4 describes the assumptions made and the measures used for each of these policy tests. Note that some of the policy changes are assumed to apply universally to all those that could be affected (for example, every mother without a high school diploma is assumed to earn a GED) while others apply only to a portion of working mothers (for example, coverage by a union contract is increased to 35 percent and employment in a high-tech industry to 15 percent of all working mothers); these latter policy changes are randomly assigned.[10]

To assess the impact of these policy changes on achieving the goals noted above, we measure four dimensions of policy impact: (1) breadth or scope of the policy change--how many working mothers experience a wage increase due to this policy change? (2) depth or intensity of the policy change--how big a wage increase did each affected woman experience? (3) efficiency or targeting--of all those woman affected by the policy change, how many reached the goal desired (experienced a wage increase to above the sufficiency wage, experienced a significant wage increase, or moved out of poverty)? and (4) effectiveness or efficacy--how much did the policy contribute to achieving the overall policy goal (for example, of all those working mothers whose families are in poverty, how many mothers were moved above poverty because of the policy change of encouraging GED attainment)? The fourth dimension, effectiveness,

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[10] In randomly assigning workers who would be impacted by a proposed policy, we first determined the subsample of those who could potentially be impacted. From this subsample, we selected the necessary number of workers using a SAS uniform distribution random number generator (RANUNI), such that the desired percent defined by the policy could be obtained. This was done by the random number generator assigning each worker a number between 0 and 1. Those workers with values less than the percent necessary to satisfy the policy were defined to be the impacted workers. We performed these selection procedures separately for the three race/ethnic groups and added the appropriate dollar benefit determined by the regression analysis.

Chart 4.

ASSUMPTIONS AND MEASURES USED IN TESTS OF THE IMPACT OF POLICY CHANGES ON WORKING MOTHERS' WAGES

Increased Education

(1) We assume an educational campaign such that all working mothers without a high school diploma obtain their GED, and as a result obtain the wage benefits of a high school diploma for their respective race/ethnic group.

(2) In addition to (1) above, we assume that all high school graduates are able to attend college and gain the wage benefits of having some college education for their respective race/ethnic group.

Increased Full-time, Full-year Employment

(3) We assume that the employers are encouraged to generate full-time, full-year jobs rather than part-time and temporary jobs, and that working mothers are employed in full-time, full-year jobs at the same rate as ever-married men (92.2 percent) and obtain the hourly wage premium for working full-time, full-year for their race/ethnic group.

Increased Work Experience and Returns to Work Experience

(4) We assume that race and gender discrimination are overcome in the labor market, and that working mothers obtain the same wage premium for each year of work experience as that obtained by white men (24 cents).

(5) We assume that employer and public policies are modified so that working mothers are encouraged to stay in the workforce for the maximum years (Age - # of years in school - 6) and receive their current benefits for each additional year of work experience.

(6) We combine aspects of (4) and (5) above, and assume that working mothers obtain the same benefits for work experience as white males for staying in the workforce for the maximum number of years.

Increased Union Contracts

(7) We assume that a series of labor policies increases the percentage of working mothers who are union members or who are covered by union contracts to the post World War II (1946) high of 35 percent, and that this increased number of working mothers obtains the hourly union wage premium for their race/ethnic group.

Increased Employment in High Tech Industries

(8) We assume that educational tracking and employment discrimination decrease and that working mothers become as likely to be employed in high-tech industries as male workers (about 15 percent) and obtain the hourly premium for working in a high-tech industry for their race/ethnic group.

Increased Employment in Male-Dominated Occupations

(9) We assume that educational tracking and employment discrimination decrease and that women begin to enter male-dominated occupations at a greater rate, so that 15 percent of working mothers, previously employed in traditionally female occupations are employed in male dominated occupations and receive the hourly wage premium for such employment for their respective race/ethnic group.

(10) We make the same assumption about decreasing educational tracking and employment discrimination, but assume that 30 percent of working mothers, previously employed in traditionally female occupations are employed in male-dominated occupations (30 percent is the tipping point above which an occupation would be considered mixed gender rather than male dominated) and receive the hourly wage premium for such employment for their respective race/ethnic group.

83

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Chart 4, cont.

Decreased Regional Wage Disparities

(11) We assume that a national policy to increase productivity and earnings results in diminishing regional wage differences so that the wage received by workers in the Northeast is the prevailing wage and that mothers' hourly wages are increased to the level of respective race/ethnic group.

Increased Job Training

(12) We assume that provisions for both private and public job training increase such that 40 percent of all working mothers receive training and receive the hourly wage premium for their respective race/ethnic group. We assume that only white working mothers benefit significantly from this policy.

Decreased Racial Differences

(13) We assume that equal employment and affirmative action policies are successful in removing the current disparity (42 cents per hour) between white and black working mothers' wages (when other factors are equal) and that black working mothers benefit from this wage premium. (Note that Hispanic mothers are not assumed to benefit from this change.)

Increased Full-Time Employment, Work Experience, and Returns to Experience

(14) We combine (3) and (6) above, and assume that working mothers are employed in full-time, year-round jobs at the same rate as ever married men and that they obtain the same benefits for work experience as white males for staying in the workforce for the maximum number of years.

summarizes the impact of the other three--an inefficient, shallow, and broad policy change may be just as effective in achieving the desired goal as a more efficient, deep, and narrow policy change. Yet the policy maker may have good reason to value each dimension independently--shallow, inefficient changes may be less expensive than deeper, more narrowly targeted changes; broader changes may gain more support from the public, and so on.

Because the policy changes being modelled are the same for all three tests (tests of how well they achieve the three desired goals), breadth and depth are the same across all three tests. A wage change due, for example, to increasing employment in male-dominated occupations to 30 percent of mothers is the same in the number of mothers affected and the amount of wage gain they experience no matter what the policy goal being tested. As Table 7 shows, the policy changes vary enormously in their breadth, ranging from affecting 4 to 100 percent of all working mothers; those policy strategies providing women with white male returns for each year of work experience are the broadest since all women have work experience. Among the narrower policy strategies are those that move women into high-tech or male-dominated jobs, which by

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definition can be applied only to relatively few workers. Also, policies differ in their breadth because, for some policies, we made more conservative assumptions than for others. For example, we assumed an increase of 10 percentage points for the proportion of women who would receive job training, but assumed that all women without high school diplomas (twice as many women) would earn GED's.

Certain policy changes affect certain groups of mothers more than others. For example, GED attainment and maximum experience affect Hispanic mothers disproportionately, while these policy changes (plus eliminating regional differences) affect proportionately more black mothers than white mothers. The depth of the proposed policy changes, measured here by the increase in median wages for those experiencing an increase, ranges from 38 cents to $4.06 per hour. Again the gains vary by group, with Hispanic women gaining more than other women from GED attainment ($1.48 per hour), black women gaining more than others from eliminating regional differences ($1.36), and white women gaining more than others from increasing full-time work ($1.27)--among other differences. Some relatively broad policy strategies--like giving women maximum experience or eliminating the effects of regional differences--have shallow wage impacts, while some narrower strategies--like expanding employment in high-tech jobs--have relatively deep wage impacts. And some policy strategies, those involving giving to women the same returns to experience as enjoyed by white men, are both broad and deep. In contrast to measures of breadth and depth, measures of efficiency and effectiveness differ according to the policy goal--wage sufficiency, wage mobility, or poverty reduction. Results for all the measures are discussed further below. After assessing the dimensions of policy impact for the three goals modelled in this study, we conclude by considering the feasibility of the suggested policy changes and the implications of our research for policy priorities.

Table 7

IMPACT OF POLICY STRATEGIES ON THE WAGES OF WORKING MOTHERS

Panel A.

	ALL WORKING MOTHERS											
	ALL POLICIES					POLICY GOAL 1 WAGE SUFFICIENCY			POLICY GOAL 2 WAGE MOBILITY			
	BREADTH		DEPTH									
POLICY	# of working mothers affected (000)	% of working mothers affected	Pre Policy Wage	Post Policy Wage	Change	# of working mothers moved to above sufficiency wage (000)	EFFICIENCY: % of all working mothers affected who moved to above sufficiency wage	EFFECTIVENESS: % of all below suffficency who moved to above sufficiency wage	# of working mothers who moved up at least 1 wage level (000(	EFFICIENCY: % of all working mothers affected who moved up at least 1 wage level	EFFECTIVENESS: % of all ≤ 150% sufficiency wage who moved up at least 1 wage level
Education	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
GED	2634	13.4	4.65	5.97	1.32	658	25.0	8.4	2136	81.1	15.4
GED + Some College	10851	55.0	5.61	6.71	1.10	1955	18.0	24.9	6585	60.7	47.4
92% Full-time	2523	12.8	5.14	6.30	1.16	500	19.8	6.4	1733	68.7	12.5
Experience											
White Male Returns	19714	100.0	6.74	8.83	2.09	3878	19.7	49.4	10629	53.9	76.5
Maximum Experience	11072	56.2	6.17	6.84	.67	1034	9.3	13.2	3423	30.9	24.6
Max. Exper. + White Male Returns	19714	100.0	6.67	9.97	3.00	5958	30.2	75.9	13082	66.4	94.2
35% Union	3592	18.2	6.22	7.29	1.07	546	15.2	7.0	1915	53.3	13.8
15% Hi Tech	1340	6.8	6.63	7.75	1.12	200	14.9	2.5	679	50.6	4.9
Occupation											
15% Female in Male Dominated	734	3.7	6.70	7.70	1.00	118	16.1	1.5	349	47.5	2.5
30% Female in Male Dominated	2110	10.7	6.46	7.46	1.00	289	13.7	3.7	974	46.1	7.0
Region-NE	12287	62.3	6.30	7.10	.80	1537	12.5	19.6	5136	41.8	37.0
Job Training	1392	7.1	6.57	6.96	.39	48	3.4	0.6	193	13.9	1.4
No Discrimination	2703	13.7	---	---	---	152	5.6	1.9	598	22.1	4.3
Max. Exper. + White Male Returns + 92% Full-time	19714	100.0	6.65	10.08	3.43	6321	32.1	80.6	13212	67.0	95.1
N		19714						7846			13889

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Table 7, cont.

IMPACT OF POLICY STRATEGIES ON THE WAGES OF WORKING MOTHERS

Panel B.

	NON-HISPANIC WHITE WORKING MOTHERS											
	ALL POLICIES					POLICY GOAL 1 WAGE SUFFICIENCY			POLICY GOAL 2 WAGE MOBILITY			
	BREADTH		DEPTH									
POLICY	# of working mothers affected (000)	% of working mothers affected	Pre Policy Wage	Post Policy Wage	Change	# of working mothers moved to above sufficiency wage (000)	EFFICIENCY: % of all working mothers affected who moved to above sufficiency wage	EFFECTIVENESS: % of all below suffficency who moved to above sufficiency wage	# of working mothers who moved up at least 1 wage level (000)	EFFICIENCY: % of all working mothers affected who moved up at least 1 wage level	EFFECTIVENESS: % of all ≤ 150% sufficiency wage who moved up at least 1 wage level
Education	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
GED	1566	10.2	4.88	6.10	1.22	364	23.2	6.4	1191	76.1	11.4
GED + Some College	8080	52.6	5.83	6.93	1.10	1493	18.5	26.2	5009	62.0	47.8
92% Full-time	1875	12.2	5.52	6.79	1.27	364	19.4	6.4	1311	69.9	12.5
Experience											
White Male Returns	15356	100.0	6.90	8.98	2.08	2833	18.4	49.7	8115	52.8	77.5
Maximum Experience	8461	55.1	6.43	7.16	.73	827	9.8	14.5	2762	32.6	26.4
Max. Exper. + White Male Returns	15356	100.0	6.86	10.08	3.22	4256	27.7	74.7	9845	64.1	94.0
35% Union	2770	18.0	6.56	7.62	1.06	394	14.2	6.9	1384	50.0	13.2
15% Hi Tech	1188	7.7	6.68	7.78	1.10	170	14.3	3.0	569	47.9	5.4
Occupation											
15% Female in Male Dominated	584	3.8	6.88	7.88	1.00	95	16.3	1.7	269	46.1	2.6
30% Female in Male Dominated	1786	11.6	6.49	7.49	1.00	269	15.1	4.7	854	47.8	8.2
Region-NE	9606	62.6	6.54	7.23	.69	863	9.0	15.1	3102	32.3	29.6
Job Training	1392	9.1	6.57	6.96	.39	48	3.4	0.8	193	13.9	1.8
No Discrimination	---	---	---	---	---	---	---	---	---	---	---
Max. Exper. + White Male Returns + 92% Full-time	15356	100.0	6.85	10.20	3.35	4526	29.5	79.4	9955	64.8	95.0
N		15356						5697			10475

Table 7, cont.

IMPACT OF POLICY STRATEGIES ON WAGES OF WORKING MOTHERS

Panel C.

	NON-HISPANIC BLACK WORKING MOTHERS										
	ALL POLICIES					POLICY GOAL 1 WAGE SUFFICIENCY			POLICY GOAL 2 WAGE MOBILITY		
	BREADTH		DEPTH								
POLICY	# of working mothers affected (000)	% of working mothers affected	Pre Policy Wage	Post Policy Wage	Change	# of working mothers moved to above suffi-ciency wage (000)	EFFICIENCY: % of all working mothers affected who moved to above sufficiency wage	EFFECTIVE-NESS: % of all below suffficency who moved to above sufficiency wage	# of working mothers who moved up at least 1 wage level (000)	EFFICIENCY: % of all working mothers affected who moved up at least 1 wage level	EFFECTIVE-NESS: % of all ≤ 150% suffi-ciency wage who moved up at least 1 wage level
Education	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
GED	495	18.3	4.43	5.77	1.34	107	21.6	7.8	419	84.6	19.7
GED + Some College	1578	58.4	4.91	5.92	1.01	263	16.7	19.3	985	62.4	46.3
92% Full-time	398	14.7	4.70	5.70	1.00	92	23.1	6.7	252	63.3	11.9
Experience											
White Male Returns	2703	100.0	5.91	8.19	2.28	669	24.8	49.0	1590	58.8	74.7
Maximum Experience	1556	57.6	5.28	5.66	.38	56	3.6	4.1	271	17.4	12.7
Max. Exper. + White Male Returns	2703	100.0	5.79	9.13	3.34	1024	37.9	75.0	1993	73.7	93.6
35% Union	508	18.8	5.24	6.22	.98	83	16.3	6.1	277	54.5	13.0
15% Hi Tech	---	---	---	---	---	---	---	---	---	---	---
Occupation											
15% Female in Male Dominated	149	5.5	5.56	6.42	.86	23	15.4	1.7	80	53.7	3.7
30% Female in Male Dominated	324	12.0	5.42	6.28	.86	20	6.2	1.5	119	36.7	5.6
Region-NE	2145	79.4	5.38	6.74	1.36	498	23.2	36.5	1588	74.0	74.6
Job Training	---	---	---	---	---	---	---	---	---	---	---
No Discrimination	2703	100.0	5.74	6.17	.43	152	5.6	11.1	598	22.1	28.0
Max. Exper. + White Male Returns + 92% Full-time	2703	100.0	5.74	9.15	3.41	1072	39.7	78.5	2007	74.3	94.3
N		2703						1365			2129

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Table 7, cont.

Panel D. IMPACT OF POLICY STRATEGIES ON WAGES OF WORKING MOTHERS

	HISPANIC WORKING MOTHERS											
	ALL POLICIES					POLICY GOAL 1 WAGE SUFFICIENCY			POLICY GOAL 2 WAGE MOBILITY			
	BREADTH		DEPTH									
POLICY	# of working mothers affected (000)	% of working mothers affected	Pre Policy Wage	Post Policy Wage	Change	# of working mothers moved to above sufficiency wage (000)	EFFICIENCY: % of all working mothers affected who moved to above sufficiency wage	EFFECTIVENESS: % of all below suffficency who moved to above sufficiency wage	# of working mothers who moved up at least 1 wage level (000)	EFFICIENCY: % of all working mothers affected who moved up at least 1 wage level	EFFECTIVENESS: % of all < 150% sufficiency wage who moved up at least 1 wage level
Education	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
GED	573	34.6	4.58	6.06	1.48	186	32.5	21.3	526	91.8	40.9
GED + Some College	1192	72.0	5.12	6.13	1.01	199	16.7	22.8	591	49.6	46.0
92% Full-time	250	15.1	4.25	5.33	1.08	44	17.6	5.0	169	67.6	13.2
Experience											
White Male Returns	1655	100.0	5.79	8.13	2.34	376	22.7	43.1	924	55.8	71.9
Maximum Experience	1055	63.7	5.12	5.97	.85	151	14.3	17.3	390	37.0	30.4
Max. Exper. + White Male Returns	1655	100.0	5.64	9.49	3.85	679	41.0	77.9	1244	75.2	96.8
35% Union	315	19.0	5.31	6.69	1.38	69	21.9	7.9	254	80.6	19.8
15% Hi Tech	151	9.1	5.31	6.79	1.48	30	19.9	3.4	109	72.2	8.5
Occupation											
15% Female in Male Dominated	---	---	---	---	---	---	---	---	---	---	---
30% Female in Male Dominated	---	---	---	---	---	---	---	---	---	---	---
Region-NE	536	32.4	5.23	6.98	1.25	176	32.8	20.2	445	83.0	34.6
Job Training	---	---	---	---	---	---	---	---	---	---	---
No Discrimination	---	---	---	---	---	---	---	---	---	---	---
Max. Exper. + White Male Returns + 92% Full-time	1655	100.0	5.63	9.69	4.06	721	43.6	82.7	1251	75.6	97.3
N	1655					872			1285		

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

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The Impact of Policy Changes on Working Mothers' Wages

The results of the tests of policy impact on the two wage-related goals are found in Table 7 and Charts 5 and 6. Table 7 and Chart 5 show the impact of the 14 policy changes on working mothers' ability to earn more than a sufficiency wage ($5.80 per hour in 1987)--that is, the number and proportion of working mothers currently earning less than $5.80 per hour who would earn above this amount as a result of the suggested changes. Table 7 and Chart 6 show the impact of the policy changes on achieving wage mobility--in increasing the earnings of working mothers at or below 150 percent of the sufficiency wage to the next higher level or beyond, where all levels are fractions or multiples of the sufficiency wage.

Impact of Changes on the Ability to Earn an Above-Sufficiency Wage

Increased Education

Approximately 2.6 million working mothers without a high school diploma would be affected by a policy designed to encourage them to obtain their GED. As Table 7, Panel A, shows, the median wage for working mothers without a high school diploma is $4.65 per hour. We project that working mothers would earn an average of $5.97 per hour, if they obtained their GED, an increase of $1.32. Black and Hispanic mothers would experience larger hourly wage gains. Earning a GED has the largest impact on working mothers' hourly wages of any policy other than those giving women the same returns for work experience as are enjoyed by white men.

GED attainment is among the more efficient policies tested in achieving wage sufficiency (ranking third on that policy dimension). Fully 25 percent of mothers potentially affected would move from earning less than a sufficiency wage to earning more than a sufficiency wage (if they received the wage premium for a high school diploma that others in their respective race/ethnic

group are currently receiving). Of all the groups, Hispanic working mothers would benefit more than other mothers from this change (one-third of all those affected would move to an above-sufficiency wage) because they are the least likely to have high school diplomas. As noted above, their wage would increase by an average of $1.48 per hour. Compared to the other policy strategies tested, attaining a GED ranks seventh in overall effectiveness for all mothers--measured by the proportion of all women earning below a sufficiency wage who are moved above a sufficiency wage by this strategy; for Hispanic mothers, GED attainment ranks fifth in effectiveness (see Chart 5).

The second educational policy shift, which not only encourages those without high school diplomas to obtain their GEDs but also encourages high school graduates to obtain some college education (although not a college diploma), would affect more than half of all working mothers (about 10.9 million). This strategy benefits white working mothers more than other mothers in terms of increased earnings ($1.10 per hour as compared to $1.01 per hour for black and Hispanic working mothers). In terms of its efficiency, a lower percentage (18 percent) of all those affected would move from earning a below-sufficiency to an above-sufficiency wage, with no particular race/ethnic group of mothers benefitting more than any other group, on the average. In terms of overall effectiveness, as a sufficiency wage strategy, as Chart 5 shows, the two-pronged policy of encouraging the GED for those without diplomas plus some college for those already having diplomas ranks fairly high for all race/ethnic groups.

Increased Full-time, Year-Round Jobs

Approximately 2.5 million working mothers would benefit from a policy shift that encourages those currently employed in part-time jobs (either voluntarily or involuntarily) to work at full-time, year-round jobs at the same rate as ever-married men (92.2 percent). The median wage of those who would benefit from this policy shift would increase from $5.14 to $6.30 per hour, for a gain of $1.16, the second largest hourly wage gain except for those giving

white men's returns for experience to women. About one-fifth of those who would be affected by this change would move from a below-sufficiency to an above-sufficiency wage. Black working mothers are the most likely to be helped by this policy shift, with 23 percent of those affected moving from a below-sufficiency to an above-sufficiency wage. Their earnings would increase by an average of $1.00 per hour as a result of the policy shift (from $5.70 to $4.70).

Increased Work Experience and Returns to Work Experience

Although years of work experience is a significant factor in predicting working mothers' wages, the monetary rewards for each year of experience are extremely low (7 cents per hour, on the average, and only 5 cents per hour for black and 6 cents per hour for Hispanic working mothers). We have modeled three strategies for increasing the returns that working mothers gain from work experience.

The first strategy is to assign the wage premium that white males obtain for each year of work experience (24 cents) to working mothers for each year of their work experience; 100 percent of working mothers would be affected by this change, with their median wage increasing from $6.74 to $8.83 per hour--a gain of $2.09 per hour. Because those earning below-sufficiency wages tend to have fewer years of work experience, this policy has only middling efficiency, ranking fifth, and moving about 20 percent of those affected by this strategy to wage sufficiency. However, the number of working mothers making such a move as a result of this policy shift is large; 3.9 million (constituting about half of all those currently earning a below-sufficiency wage), making it the most effective single strategy to achieve wage sufficiency. This strategy clearly has a strong impact on increasing wages for all groups of mothers, ranking third for all groups among all strategies, including the multiple ones. As a wage sufficiency strategy, it is most efficient for black and Hispanic working mothers--with almost one quarter of the black and Hispanic working mothers affected by the shift moving to an above-sufficiency wage. This is because black and Hispanic working mothers receive even lower returns for years of work

experience than do white working mothers, when other factors are equal. The median wage increase for those black and Hispanic mothers earning less than a sufficiency wage would be more than $2.50 per hour (not shown on table).

The next strategy--encouraging working mothers to remain in the labor force so that they benefit from the maximum possible years of experience (at their current rate of 7 cents per hour for white, 6 cents per hour for Hispanic, and 5 cents per hour for black working mothers)--has about half the impact of the first strategy. About half of all working mothers would be affected, with their wages increasing significantly less (only 67 cents per hour) than if they received the white male premium to their current years of work experience ($2.09 as we saw above). Fewer than 10 percent of those affected by the policy would move from a below-sufficiency to an above-sufficiency wage (with an average wage increase of 86 cents per hour--not shown on table). There are, however, important differences by race and ethnicity. Only 4 percent of those black working mothers affected by increased years of work experience would move from a below-sufficiency to an above-sufficiency wage, in contrast to 10 percent of white and 14 percent of Hispanic working mothers. Because Hispanics have the fewest years of work experience, on average, they would benefit the most from policies aimed at increasing their work years to the maximum possible level. The lack of impact on black mothers of increasing their years of experience indicates both the effect of low returns to experience for women (and especially black women) and the fact that many of them already have the maximum possible years of work experience. In terms of overall effectiveness, this policy ranks near the bottom for non-Hispanic black women and near the middle for Hispanic and non-Hispanic white women.

The third strategy--of first maximizing working mothers' years of experience and then assigning a white male wage premium to those years--likewise affects all working mothers. It would have a very large impact on wage levels--those affected would gain $3.30 per hour, on the average, moving from $6.67 to $9.97 per hour. This strategy is also a very efficient one, moving a large proportion (30 percent of all mothers and 38 percent of black and 41 percent of

Hispanic mothers) of those affected from a below-sufficiency to an above-sufficiency wage. Nearly six million working mothers (three-quarters of mothers currently earning a below-sufficiency wage) would earn an above-sufficiency wage as a result; their hourly wages would increase $3.10 per hour on average (not shown in table). Overall, it is the second most effective policy strategy tested, and one that is very effective for low-wage black and Hispanic mothers. Hispanic mothers would gain the most in terms of average earnings--their wages would increase by an average of $3.95 per hour; black women would gain $3.34 per hour compared to $3.22 per hour for white women.

Increased Coverage by Union Contracts

If the percentage of working mothers who are union members or are covered by union contracts doubled (i.e., increased from the current 17 percent to 35 percent, the 1946 high for union membership in the U.S.), about 3.6 million working mothers would be affected by this change, with an average wage increase from $6.22 to $7.29 per hour. Of those affected, about 15 percent of all working mothers, 16 percent of black working mothers, and 22 percent of Hispanic working mothers would move from earning a below-sufficiency to an above-sufficiency wage. For those mothers with a below-sufficiency wage, their average wage would increase by $1.06 per hour, from $5.21 to $6.27 (not shown on table). In terms of the proportion of working mothers earning below sufficiency wages and moved above them, union representation is the eighth most effective strategy, about middling in overall rank, bringing 1/2 million women to sufficiency wages.

Increased Employment in High-Tech Industries

High-tech industries do not as yet account for a very large portion of the overall labor force. Overall, therefore, if working mothers' participation in these industries was brought up to a male level (about 15 percent), fewer than 1.3 million working mothers would be affected.

Their average wage would increase by $1.12 per hour from $6.63 to $7.75. About 15 percent of all those affected would move from a below-sufficiency to an above-sufficiency wage, but there are important race/ethnic differences here. Low-wage Hispanic mothers would gain most from this strategy, with 20 percent moving from a below-sufficiency to an above-sufficiency wage. Their average wage would increase by $1.48 per hour from $5.04 to $6.52 (not shown on table). Because this factor was not significant in the model for black working mothers, we are assuming that increased employment in high-tech industries would not have any impact on increasing this group's earnings. In terms of overall effectiveness, increased employment in high-tech industries ranks near the bottom.

Increased Employment in Male-Dominated Occupations

Although we saw that employment in male-dominated occupations increases working mothers' earnings by $1.00 per hour, on the average, a small portion (about 10 percent) of working mothers currently work in these occupations. By definition, it is unlikely that large portions of women could work in male-dominated occupations (because if more than 30 percent of women did so, the jobs would no longer be defined as male-dominated). We have modeled two levels of increased employment in these occupations; the first assumes that there is a 5 percent increase and, as a result, 15 percent of working mothers would be employed in male-dominated occupations. The second is a more optimistic shift which assumes that working mothers' employment increases to the 30 percent "tipping point."

The first strategy is not very broad in scope and would affect fewer than three-quarters of a million working mothers--the least of any of the fourteen strategies we test. Of the working mothers affected, about 16 percent would move from a below-sufficiency to an above-sufficiency wage. This shift is about equally efficient as a sufficiency wage strategy for black as for white working mothers. As a result of this policy strategy, white working mothers with below-sufficiency wages would increase their average hourly earnings by $1.00 per hour, while black

working mothers would increase theirs by 86 cents per hour (not shown on table). Because employment in male-dominated occupations was not a significant factor in the model for predicting Hispanic working mothers' wages, we assume that increased employment in male-dominated occupations would not have any impact on increasing their wages to an above-sufficiency level. In terms of overall effectiveness, this policy ranks near the bottom.

Increasing working mothers' employment in male-dominated occupations to the tipping point (30 percent), obviously has a greater effect. More than 2.1 million working mothers would be affected if 30 percent were employed in male-dominated occupations, with an average wage increase of $1.00 per hour from $6.46 to $7.46. Because a larger number of women would be affected at all levels of the wage continuum, a slightly smaller percentage (14 percent) would move to an above-sufficiency wage than as a result of the previous strategy. A smaller percentage of low-wage black working mothers are affected by this strategy than are white working mothers, and, as above, we assume that Hispanic working mothers would not benefit from this shift. For all working mothers, this policy ranks tenth in effectiveness.

Decreased Regional Wage Disparities

Over the last two decades the U.S. has witnessed uneven regional development, with continued (in the case of the South) or increased (in the case of the Midwest) wage disparities between these regions and the Northeast. As we have seen, these differences significantly affect the wages of working mothers. If these regional wage disparities were overcome through a wage and productivity policy that increased the wage levels of all regions to those in the Northeast, more than 12 million working mothers would be affected, making it one of the broadest policies. Of these, 12.5 percent would move from earning a below-sufficiency to an above-sufficiency wage. This strategy would be more efficient for low-wage black and Hispanic mothers, who lose more than white women when employed in the low-wage Southern region of the country. The wages of 23 percent of black mothers and 33 percent of Hispanic mothers (compared to only 9

percent of white mothers) affected by this strategy would increase to an above-sufficiency level. Their average wages would increase by $1.41 for black working mothers and $1.73 for Hispanic working mothers earning less than a sufficiency wage (not shown on table).

Increased Job Training

Currently, about 30 percent of working mothers report that they have had some form of public or private job training. This response could mean anything from participation in a publicly financed Job Training Partnership Act (JTPA) program, to participation in an employer-sponsored workshop, to a course taken at a local junior college. For the purposes of this test, we assume that the percentage of working mothers with some job training would increase by 10 percent to 40 percent (although we did not make any assumptions about the kind of job training obtained). Approximately 1.4 million working mothers would be affected by this strategy, increasing their wages by 39 cents per hour, one of the smallest wage impacts of any policy, and making this one of the narrowest and shallowest of policies. Not surprisingly, therefore, it is also relatively inefficient and ineffective. Of those affected by the policy, only 3 percent would move from a below-sufficiency to an above-sufficiency wage, constituting less than 1 percent of all those earning below-sufficiency wages.

In this model, increased job training does not appear to be a meaningful sufficiency wage strategy. Job training was found to be statistically significant in affecting hourly wages only in the regression models for white working mothers and for mothers with education at the high school completion level or less. It is possible that the lack of significance stems from the lack of specificity in the measure of training; a more clearly defined training variable with measurable gradations in terms of days, weeks, or months of training, would make it more possible to measure the effect of training on wages. The poorly-specified variable produces a weak wage effect, which in turn requires a larger sample size in order to be statistically significant. It might also be useful to keep in mind that although 39 cents per hour is one of the smaller wage effects

measured, it may correspond reasonably well to the effort involved in getting the training. After all, short training programs cannot be expected to produce wage effects as large as those produced by extensive study in high school or college.

Decreased Race Discrimination

As we have seen, racial disparities in working mothers' wages are institutionalized in many of the factors that we have examined thus far--such as the smaller wage premiums earned for job characteristics and the higher percentage of black and Hispanic mothers in low-wage regions of the country. Here, we investigate the impact of erasing *additional* race-based disparities in earnings, when other factors are held constant. Approximately 2.7 million working mothers would be affected by this strategy; their earnings would increase by 43 cents per hour. Because racial disparities in wages exist at every income level, only 6 percent of those affected would move from a below-sufficiency to an above-sufficiency wage. Based on our assumptions, all of those affected are black working mothers. Although the regression models showed that Hispanic working mothers lost 27 cents per hour, other factors being equal, on the basis of their ethnicity, this factor was not statistically significant, and we have, therefore, assumed that Hispanic working mothers would not benefit from this strategy. For black mothers, eliminating race discrimination ranks sixth in effectiveness, ahead of: encouraging more GED attainment; increasing full-time employment, unionization, and years of work experience; and participating in male dominated occupations.

Maximizing Work Experience, Returns to Experience, and Employment in Full-Time, Year-Round Jobs

As a final policy test, we examine a three-way policy shift. We assume that public and employer policies are modified so that working mothers are encouraged to stay in the workforce for the maximum number of years (i.e., the age of the worker minus the number of years of

schooling minus six years, the age at which schooling typically begins). We further assume that race and gender discrimination are overcome in the workforce so that working mothers receive the same average wage premium for each year of work experience as do white men (24 cents). Lastly, we assume that enough full-time, year-round jobs are created so that working mothers are encouraged to participate in full-time, year-round jobs at the same rate as ever-married men (92 percent).

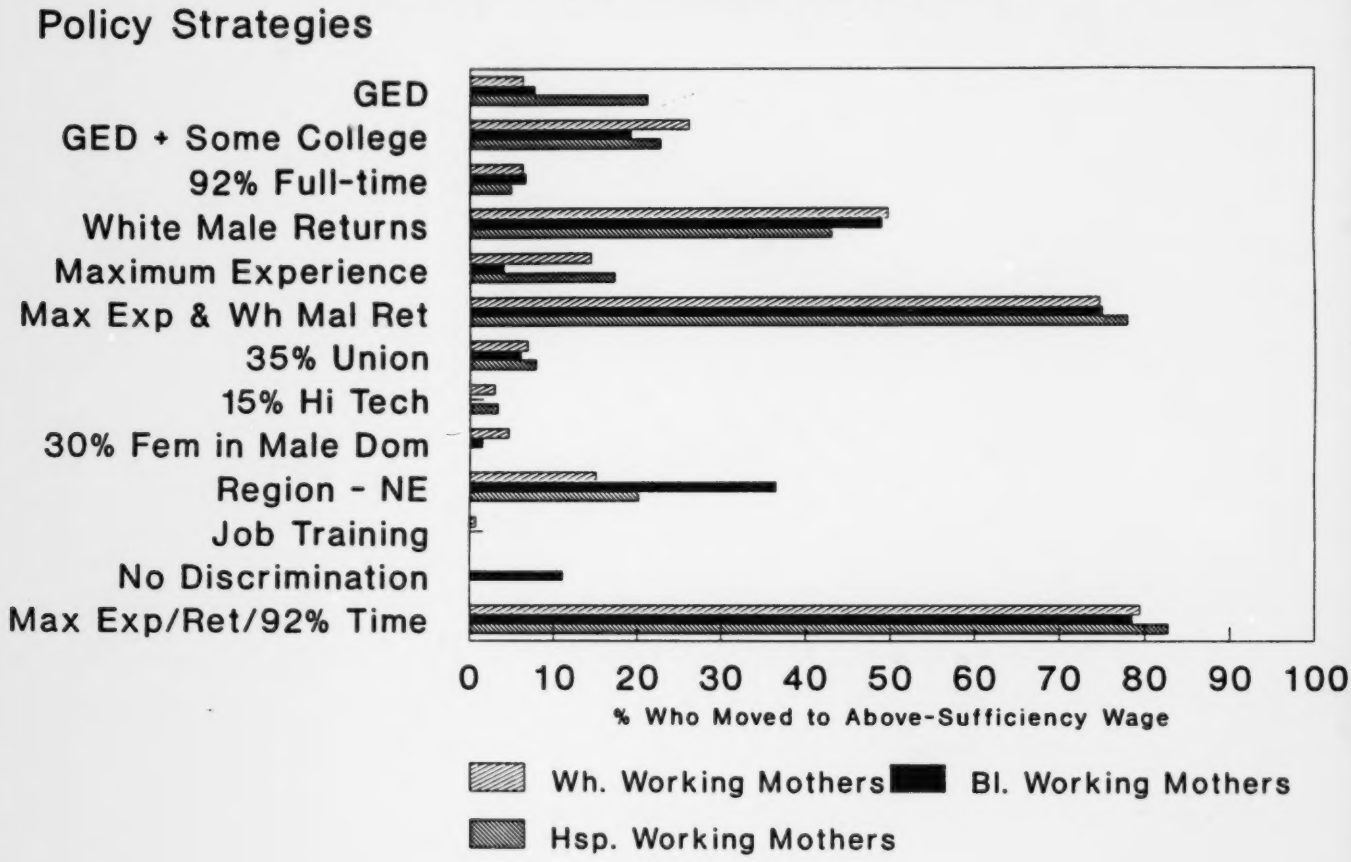
Not surprisingly, this three-way policy shift is the deepest; it has the greatest impact on all working mothers' wages, with an average hourly wage increase of $3.43. It also is both the most efficient and the most effective sufficiency wage strategy. Almost one-third of those affected by this strategy would increase their earnings from below $5.80 per hour to an above-sufficiency wage. Four out of 10 black working mothers affected by this policy would gain a sufficiency wage, with an average hourly increase of $3.35 (not shown in table). And 44 percent of Hispanic working mothers would gain a sufficiency wage, with an average hourly increase of almost $5.00 per hour (not shown in table). This three-pronged policy strategy, that both increases and rewards the labor force participation of working mothers, has a maximal impact on their earnings. It is the deepest, broadest, most efficient, and most effective policy for all racial and ethnic groups studied.

Summary of Effectiveness of Policy Strategies for Moving Working Mothers' Wages Above a Sufficiency Level

As we have seen, some of these suggested policy changes are more pervasive in scope and affect a greater number of working mothers, while some affect relatively few. Some appear to be especially beneficial for those working mothers earning less than a sufficiency wage, moving a high proportion of such women to a sufficiency wage and above, while others appear to be less effective as a sufficiency wage strategy. Some shifts are more effective for white mothers while some are more effective for black or Hispanic mothers. Chart 5 displays the

CHART 5

Effectiveness of Policy Strategies in Increasing Mothers' Earnings Above A Sufficiency Wage



Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

impact of these policy shifts in terms of the proportion of all mothers earning below a sufficiency wage whose wage is raised above the sufficiency level--our measure of overall effectiveness--by race and ethnicity. Those policies which are broad in their coverage, or efficient in targeting their impact on women with below sufficiency wages, or both, bring wages up to sufficiency for the most women.

The most effective policy strategy for all race/ethnic groups is the three pronged strategy of maximizing years of work experience, rewarding work experience with returns as high as those gained by white male workers, and increasing the percentage of working mothers employed full-time, year-round to the same rate as ever-married men. The second most effective strategy is to the dual strategy of maximizing years of work experience and rewarding work experience with the same returns enjoyed by white male workers. As Chart 5 shows, maximizing women's work experience, by itself, is less effective as a sufficiency wage strategy. On the other hand, rewarding working mothers' current years of work experience at the same level as white men's is, by itself, one of the most effective wage strategies for all groups of mothers--ranking third, and bringing half of all low-wage mothers up to the sufficiency wage standard. It is also the most effective single strategy. Decreasing regional wage disparities is a broad and effective sufficiency wage strategy. Earning a GED is an effective sufficiency wage strategy for Hispanic working mothers (but somewhat less so for non-Hispanic black and white women). Clearly, the double- and triple-pronged strategies that simultaneously increase and reward working mothers' labor force participation are the most efficient and effective means by which to increase their wages to the sufficiency wage level or above.

Impact of Policy Changes on Wage Mobility for All Low-Wage Working Mothers

Having tested the suggested policy changes to determine which are most effective at bringing mothers' wages up to or above the sufficiency level, we next examine the effectiveness of these strategies for increasing the wage mobility of mothers along the wage distribution,

especially of those mothers earning less than 150 percent of the sufficiency wage. These mothers constitute the bottom 70 percent of all working mothers (see Table 8).

Table 8.

DISTRIBUTION OF WORKING MOTHERS' WAGES BY PERCENTAGE OF SUFFICIENCY WAGE ($5.80 per Hour in 1987 $)

	Wage Levels						
	0-50% $0-$2.90	50-75% $2.91-4.35	75-100% $4.36-5.80	100-125% $5.81-7.25	125-150% $7.26-8.70	150% + $8.71 +	Total
N	798,974	3,344,817	3,822,168	3,336,017	2,587,412	5,824,664	19,714,052
Percent	4.1	17.0	19.4	16.9	13.1	29.6	100.0

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

For this analysis, the current wages of working mothers are categorized as follows: 1) those earning 0-50 percent of a sufficiency wage ($0-$2.90 per hour); 2) those earning 51-75 percent of a sufficiency wage ($2.91-$4.35 per hour); 3) those earning 76-100 percent of a sufficiency wage ($4.36-$5.80 per hour); 4) those earning 101-125 percent of a sufficiency wage ($5.81-$7.25 per hour); 5) those earning 126-150 percent of a sufficiency wage ($7.26-$8.70 per hour); and 6) those earning more than 150 percent of a sufficiency wage ($8.71 per hour or more). As Table 8 shows, 40 percent (or close to eight million working mothers) earn less than a sufficiency wage, an additional 30 percent (about six million working mothers) earn between 100 and 150 percent of a sufficiency wage, and only 30 percent (or an additional six million working mothers) earn more than 150 percent of a sufficiency wage. The policy strategies are applied in the same manner as they were for the first set of tests. But here the policy goal is not helping women reach a specific target (the sufficiency wage level) but rather helping women

at all low wage levels move up at least one wage level, a less restrictive goal which we refer to as wage mobility.

To test the impact of the suggested policy changes, we examine the efficiency dimension--the percentage of working mothers that would advance from their current position to at least the next highest wage level--and the effectiveness dimension--the proportion of all low-wage mothers that each policy moves up. These impact measures are shown in Table 7 above (columns 10 and 11). The table shows that all the policy measures are more efficient and more effective in achieving this policy goal--wage mobility--than in achieving wage sufficiency. Nearly twice as many mothers are able to move up at least one wage level in earnings. It shows an extremely wide variation in benefits, ranging from only one percent of all working mothers benefitting from increased job training to 95 percent of all working mothers benefitting from a three-pronged strategy of maximizing experience, returns to experience, and employment in full-time, year-round jobs. The rank order of the effectiveness of the 14 policy strategies tested is virtually the same for both wage-related policy goals (see Table 11 below).

Just as we saw earlier for wage sufficiency, the single strategy that would have the most impact on wage mobility in terms of overall effectiveness is increasing the dollar returns to working mothers' years of employment experience (currently at 7 cents per hour, on the average) to the level of dollar returns obtained by white men (currently at 24 cents per hour). The wages of 77 percent of all low-wage working mothers would increase as a result of this single strategy. For those who achieve the policy goal of moving up one wage level, the average hourly wage increase would be $2.18, with black working mothers benefitting most with a projected average increase of $2.50 per hour (not shown on table). Other very effective wage mobility strategies include attaining some college education for those with high school diplomas (as well as GED's for those without), reducing regional differences, and increasing women's work experience. For black working mothers, eliminating regional differences is the second most effective single strategy for achieving wage mobility (as it is for achieving wage sufficiency).

Three-quarters would experience wage mobility--averaging $1.39 per hour--as a result of raising the low wages of the southern United States to the level of those in the Northeast. The relative effectiveness of the 14 different policy strategies for achieving wage mobility for the three race/ethnic groups in the study can be seen in Chart 6.

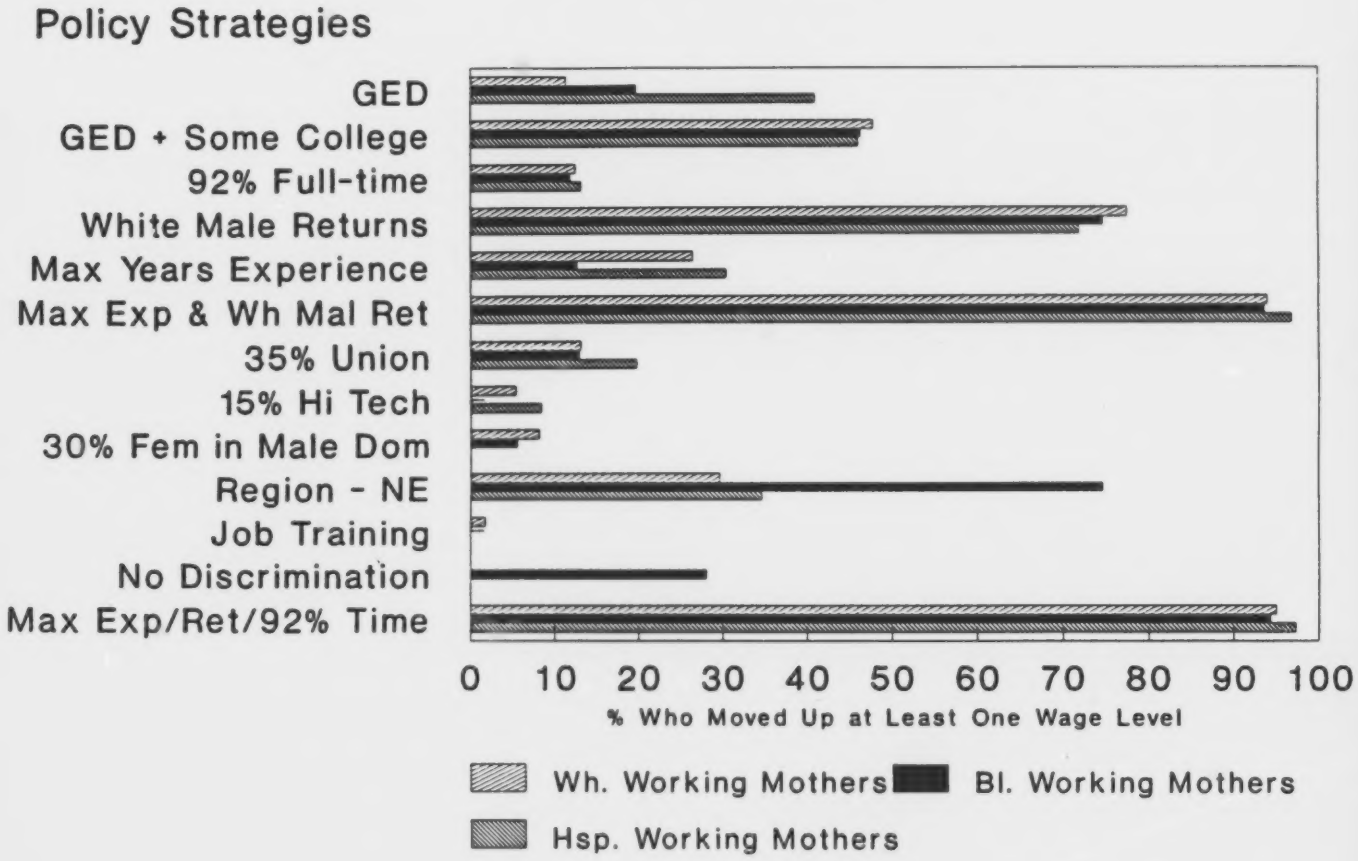
As Chart 6 indicates, once again the most effective strategies for achieving the policy goal are the two- and three-pronged strategies related to increasing work experience, returns to experience, and in the three-pronged strategy, increasing employment in full-time jobs. Ninety-five percent of white mothers would experience wage increases of at least one level under the three-pronged strategy; while 94 percent would benefit from the two-pronged strategy. Hispanic mothers benefit slightly more from both policy changes; black mothers slightly less.

Table 7 indicates that encouraging the attainment of GED's for those without high school diplomas is the single most efficient strategy for all groups of working mothers, bringing up 81 percent of all mothers who earn the GED and 92 percent of Hispanic mothers at least one wage level. Hispanic working mothers would experience the greatest average increase in wages--$1.48--as a result of this educational strategy. Other well-targeted strategies for achieving wage mobility include encouraging full time work, attaining some college education for those with high school diplomas, (as well as GED's for those without), and increasing women's return for experience to the level of white men's.

In testing the impact of these policy strategies on wage mobility, it seems useful to examine another dimension of impact--the distribution of the impact across the differing wage levels. Which of these policy strategies appear to be universal in their impact by affecting working women in all wage categories equally? Which policy strategies most affect women at the low end of the distribution, which most affect those in the middle, which most affect those at the high end of the wage distribution? Table 9 presents a summary of our findings on the distributional questions; the data used to arrive at these conclusions can be found in Appendix Table 6. In analyzing the distributive impact of the wage policies we limited our analysis to low-

CHART 6

Effectiveness of Policy Strategies: % Who Moved Up at Least One Wage Level



Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

wage mothers, those earning hourly wages equal to or less than 150 percent of the sufficiency wage before the policy strategies were implemented.

As Table 9 indicates, the distributional impact of the 14 policy strategies differs. Some policies do help working mothers at the very bottom more, while others provide greater wage mobility for those nearer the top of our low-wage group. Some are more beneficial for white mothers, others for black or Hispanic mothers.

Perhaps the most striking result in Table 9 is that the three-way strategy, increasing experience, returns to experience, and full-time employment, which we saw above is the broadest, deepest, most efficient, and most effective policy in terms of achieving both wage-related policy goals (wage sufficiency and wage mobility) is also a very universal policy; it distributes benefits equally to all low-wage women (those earning hourly wages within 150 percent of the sufficiency wage) and to all race/ethnic groups studied. Similarly, the two-pronged strategy of increasing experience and returns to experience also has a very even distributive impact among low-wage mothers.

Those with the very lowest wages, from 0 to 75 percent of the sufficiency wage, are helped most by two policies: increasing years of work experience and eliminating race discrimination. The first is particularly beneficial to black mothers earning between 0 and 50 percent of the sufficiency wage. The working mothers with the very lowest hourly wages are minority women with limited work experience.

Most of the policies disproportionately help those earning 51 to 100 percent of the sufficiency wage; these are the mothers for whom the policies often work to bring them up over the sufficiency wage threshold. GED attainment is especially helpful to white mothers earning 51 to 75 percent of the sufficiency wage. The two-pronged policy of GED attainment and some college for those with high school diplomas helps Hispanic mothers at that same wage level the most. Job training also benefits mothers at the 51 to 75 percent wage level most; in our model because white mothers were the only ones with statistically significant gains from training they

Table 9.

EFFECTIVENESS OF POLICY STRATEGIES FOR WAGE MOBILITY
OF ALL GROUPS OF LOW-WAGE WORKING MOTHERS

Policy	At which wage levels is mobility most likely?	Which race/ethnic groups benefit most from wage mobility?
Education		
GED	51-75% of sufficiency wage	White Moms
GED + Some College	51-75% of sufficiency wage	Hispanic Moms
92% Full-time	51-75% of sufficiency wage (for Black Moms--those with 76-100% of sufficiency wage benefit most)	Hispanic Moms
Experience		
White Male Returns	101-150% of sufficiency wage	Black and Hispanic Moms
Maximum Experience	0-75% of sufficiency wage (for Hispanic Moms--those with 76-100% of sufficiency wage also benefit)	Black Moms at 0-50% of sufficiency wage
Maximum Experience + White Male Returns	All levels above 0% affected equally	All Moms
35% Union	51-100% of sufficiency wage	Hispanic Moms
15% High Tech	76-100% of sufficiency wage (for Hispanic Moms--those with 101-125% of sufficiency wage)	White Moms
Occupation		
15% Female in Male Dominated	76-100% of sufficiency wage (for Black Moms--those with 51-75% of sufficiency wage)	White Moms
30% Female in Male Dominated	76-100% and 126-150% of sufficiency wage (for Black Moms--those with 51-75% of sufficiency wage)	Black Moms
Region-NE	51-75% of sufficiency wage (for Hispanic Moms--those with 76-100% of sufficiency wage)	Black Moms
Job Training	51-75% of sufficiency wage	White Moms
No Discrimination	0-75% of sufficiency wage	Black Moms
Maximum Experience + White Male Returns + 92% Full-time	All levels above 0% affected equally	All Moms

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Note: IWPR's analysis of the distributional impact of policies for wage mobility is limited to working mothers earning hourly wages between 0 and 150% of the sufficiency wage.

are the only ones assumed to benefit from training. Encouraging more full-time work helps Hispanic mothers at that same wage level as well as black mothers earning a bit more (between 76 and 100 percent of the sufficiency wage). Eliminating regional differences would also help those earning between 51 and 75 percent of the sufficiency wage and would especially benefit black mothers. Hispanic mothers earning slightly more (between 76 and 100 percent of the hourly wage) would also benefit disproportionately. Finally, increasing union membership and representation provides the most wage mobility to those earning 51 to 100 percent of the sufficiency wage, and especially to Hispanic mothers.

The policy strategies of increasing representation in high-tech industries and in male-dominated occupations seem to benefit most those mothers with slightly higher earnings. For example, increasing mothers' representation in high-tech industries to 15 percent, the current male level, helps most those earning 76 to 100 percent of the sufficiency wage, and especially white mothers. Hispanic mothers earning 101 to 125 percent of the sufficiency wage are also estimated to benefit disproportionately from high-tech employment. Increasing employment in the male-dominated occupations benefits various groups earning between 51 and 150 percent of the sufficiency wage, with black mothers at the lower end of that range benefitting especially.

The single strategy of providing women with white male returns to experience seems to benefit most those who are already earning just above a sufficiency wage (from 101 to 150 percent of sufficiency), presumably because these are the mothers with the most years of experience. Black and Hispanic mothers benefit disproportionately from being assigned white male returns, because for them the effects of eliminating race discrimination add to the overall value of the policy.

The Impact of Policy Changes on Family Poverty

In 1987, the poverty rate (based on the U.S. Bureau of the Census' official measure) for all families with children under age 18 was 16.8 percent (up from 12.9 percent in 1977). In this

same year, our findings show that the poverty rate (using the official definition) for the families of working mothers was 5.2 percent on the average, 3.1 percent for families of white working mothers, 8.6 percent for families of Hispanic working mothers and 14.5 percent for families of black working mothers. Rates for never or formerly married working mothers, especially those with a high school diploma or less, were substantially higher. For example, 17.4 percent of the families of never married working mothers are poor; 22.1 percent of the families of formerly married Hispanic mothers, 24.7 percent of the families of formerly married black mothers and 31.4 percent of the families of formerly married black mothers with a high school diploma or less have a family income below the official poverty line when all sources of income are taken into account (including mothers' earnings, earnings from other family members--including spouses--cash income from government programs and benefits, child support, interest, property and any other source). Reducing family poverty is the third policy goal for which we analyze the effects of the fourteen policy strategies identified in this study.

Many researchers would suggest that the official poverty measure severely underestimates a realistic minimum level of living (Ruggles, 1990) and especially a realistic minimum necessary for a family with a working mother (Helburn and Morris, 1989). In recognition of the current debate concerning a realistic poverty threshold for a family that includes a working mother and her children, we use two different definitions of poverty in evaluating the effectiveness of policies to reduce poverty. The first definition is based on the official annual poverty thresholds established by the U.S. Bureau of the Census for various family sizes (e.g., $9,690 in 1987 dollars for a family of three; $11,650 in 1987 for a family of four). This definition is referred to as "Poverty I" in subsequent text, charts, and tables. The second definition supplements the official definition with the notion of a sufficiency wage that we have used throughout this study. We add an extra $1,830--our estimated annual cost of child care--to the annual poverty threshold for the families of working women with at least one child. This additional amount would raise the annual poverty threshold for a family of three from

$9,690 (in 1987 dollars) to $11,520 (or approximately $5.80 per hour, if the mother worked full-time, year-round). This second method produces a conservative increase in a family's annual poverty threshold because child care costs are only added for one child, regardless of the number of children under age six in the family. This definition is referred to as "Poverty II" in subsequent text, charts, and tables.

As Table 10 indicates, there are over one million poor families with working mothers in the United States using the first definition, and almost 1.2 million families using the second definition. The measures of policy efficiency and effectiveness for achieving the third goal of reducing family poverty are shown in Table 10 for the various policies and for whites and blacks separately. Poor Hispanic families with working mothers are not included in this analysis because of problems of small sample size.

In Table 10, effectiveness is defined as the percentage of all poor families with working mothers who would move from a below-poverty to an above-poverty threshold, where poverty is defined in two ways (Poverty I and Poverty II). It should be noted that the impact of our wage-related policy strategies for reducing family poverty occur through their effect on family income. Because it requires more family income to move out of poverty using the Poverty II definition, we can expect that a larger number, but a smaller percentage, of poor families will do so as a result of the proposed policy changes. The efficiency of each policy is defined as the number of poor families with working mothers who moved out of poverty, relative to the number of all families impacted by the policy; it is also presented in percentage terms. Because few families of working mothers are poor overall, the efficiency of any of these policies in reducing poverty is very low. These policies are not well targeted toward poor families; they help many other families as well. Nevertheless, as the effectiveness measure shows, even though they are not targeted particularly at the poor, some of them are very effective in lifting the families of working mothers out of poverty. The most effective--the three-pronged strategy of increased work experience, increased returns, and increased full-time employment--lifts approximately 50

Table 10.

THE IMPACT OF POLICY STRATEGIES ON
POVERTY OF WORKING MOTHERS

Panel A.

Policy	ALL WORKING MOTHERS IN POVERTY					
	Poverty I			Poverty II		
	# of working mothers who move out of Poverty (000)	EFFICIENCY: % of working mothers affected by policy who move out of Poverty	EFFECTIVENESS: % of all in Pov I who move out of poverty	# of working mothers who move out of Poverty (000)	EFFICIENCY: % of working mothers affected by policy who move out of Poverty	EFFECTIVENESS: % of all in Pov II who move out of poverty
Education						
GED	107	4.1	10.5	119	4.5	9.9
GED + Some College	227	2.1	22.4	249	2.3	20.8
92% Full-time	222	8.8	21.9	232	9.8	19.3
Experience						
White Male Returns	67	0.3	6.6	74	0.4	6.2
Maximum Experience	90	0.8	8.9	91	0.8	7.6
Max. Experience + White Male Returns	357	1.8	35.2	383	1.9	31.9
35% Union	78	2.2	7.7	82	2.3	6.8
15% Hi Tech	25	1.9	2.5	20	1.5	1.7
Occupation						
15% Female in Male Dominated	23	3.1	2.3	9	1.2	0.8
30% Female in Male Dominated	55	2.6	5.4	19	0.9	1.6
Region-NE	163	1.3	16.1	212	1.7	17.7
Job Training	----	----	----	---	---	---
No Discrimination	52	1.9	5.1	75	2.8	6.3
Max. Experience + White Male Returns + 92% Full-time	548	2.8	54.0	583	3.0	48.6
N	1015			1199		

Table 10, cont.

THE IMPACT OF POLICY STRATEGIES ON
POVERTY OF WORKING MOTHERS

Panel B.

Policy	NON-HISPANIC WHITE WORKING MOTHERS IN POVERTY					
	Poverty I			Poverty II		
	# of working mothers who move out of poverty (000)	EFFICIENCY: % of working mothers affected by policy who move out of poverty	EFFECTIVENESS: % of all in Pov I who move out of poverty	# of working mothers who move out of poverty (000)	EFFICIENCY: % of working mothers affected by policy who move out of poverty	EFFECTIVENESS: % of all in Pov II who move out of poverty
Education						
GED	47	3.0	9.8	34	2.2	6.0
GED + Some College	125	1.5	26.0	104	1.3	18.5
92% Full-time	97	5.2	20.2	116	6.2	20.6
Experience						
White Male Returns	22	0.1	4.6	19	0.1	3.4
Maximum Experience	42	0.5	8.7	34	0.4	6.0
Max. Experience + White Male Returns	155	1.0	32.2	158	1.0	28.1
35% Union	44	1.6	9.1	35	1.3	6.2
15% Hi Tech	20	1.7	4.2	14	1.2	2.5
Occupation						
15% Female in Male Dominated	5	0.9	1.0	5	0.9	0.9
30% Female in Male Dominated	28	1.6	5.8	10	0.6	1.8
Region-NE	49	0.5	10.2	56	0.6	9.9
Job Training	---	---	---	---	---	---
No Discrimination	---	---	---	---	---	---
Max. Experience + White Male Returns + 92% Full-time	236	1.5	49.1	249	1.6	44.2
N			481			563

Table 10, cont.

THE IMPACT OF POLICY STRATEGIES ON
POVERTY OF WORKING MOTHERS

Panel C.

Policy	NON-HISPANIC BLACK WORKING MOTHERS IN POVERTY					
	Poverty I			Poverty II		
	# of working mothers who move out of poverty (000)	EFFICIENCY: % of working mothers affected by policy who move out of poverty	EFFECTIVENESS: % of all in Pov I who move out of poverty	# of working mothers who move out of poverty (000)	EFFICIENCY: % of working mothers affected by policy who move out of poverty	EFFECTIVENESS: % of all in Pov II who move out of poverty
Education						
GED	19	3.8	4.8	30	6.1	6.5
GED + Some College	61	3.9	15.6	89	5.6	19.2
92% Full-time	95	23.9	24.2	89	2.2	19.2
Experience						
White Male Returns	45	1.7	11.5	54	2.0	11.7
Maximum Experience	25	1.6	6.4	28	1.8	6.0
Max. Experience + White Male Returns	131	4.8	33.4	154	5.7	33.3
35% Union	18	3.5	4.6	29	5.7	6.3
15% Hi Tech	---	---	---	---	---	---
Occupation						
15% Female in Male Dominated	18	12.1	4.6	3	2.0	0.6
30% Female in Male Dominated	27	8.3	6.9	8	2.5	1.7
Region-NE	87	4.1	22.2	118	5.5	25.5
Job Training	---	---	---	---	---	---
No Discrimination	52	1.9	13.3	74	2.7	16.0
Max. Experience + White Male Returns + 92% Full-time	229	8.5	58.4	246	9.1	53.1
N			392			463

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

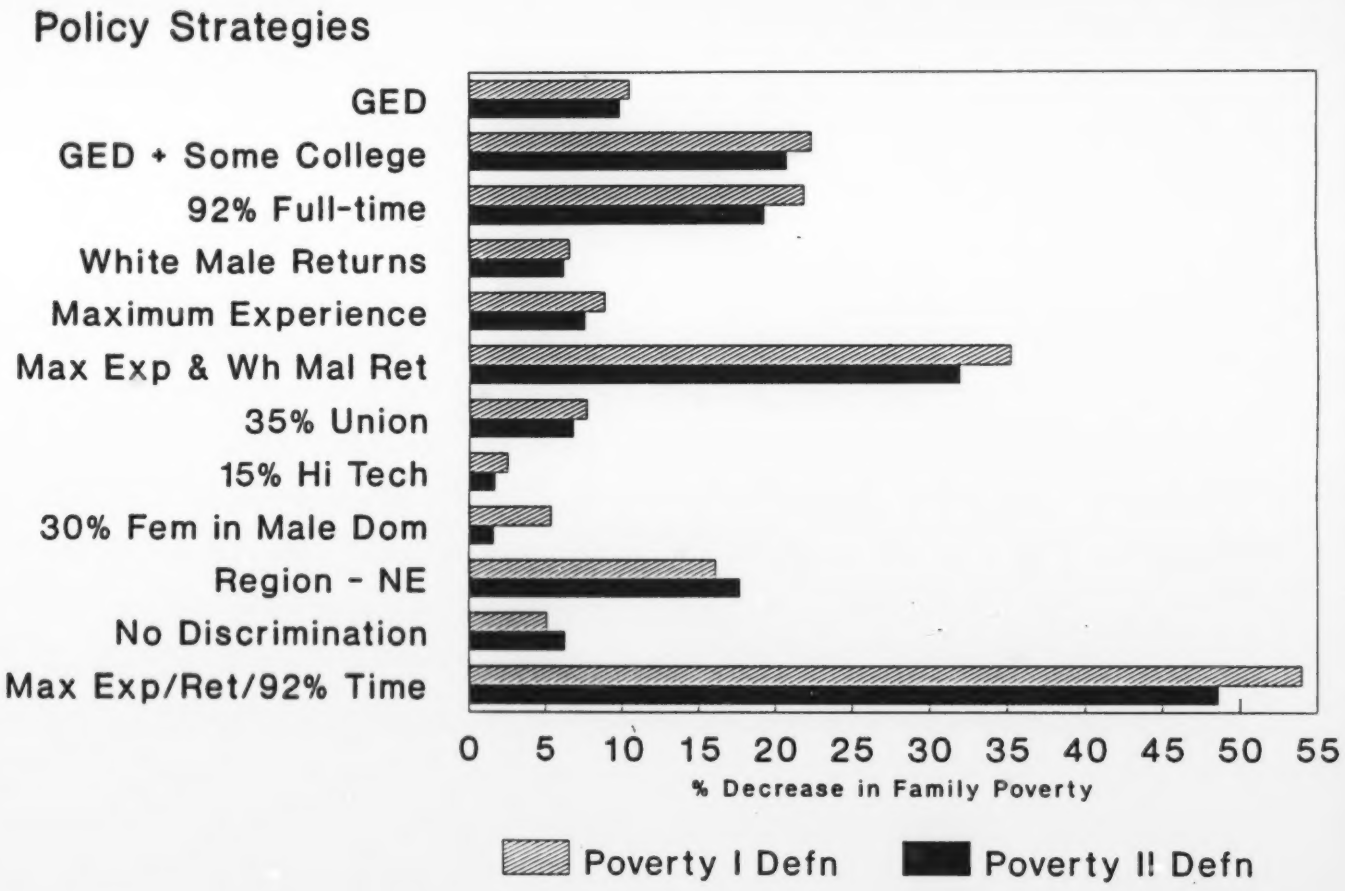
percent of the poor families of working mothers out of poverty according to both definitions I and II. Other effective strategies include the two-pronged experience strategy (increasing years plus returns), the two-pronged educational strategy (some college plus GED's), and increasing full-time employment. Reducing regional differences ranks fifth in terms of helping the families of black working mothers rise above Poverty II. For black mothers, eliminating racial discrimination ranks as the fourth most effective policy, for both Poverty I and Poverty II.

In lifting families out of poverty, we find that different policy changes are most efficient (compared to those most efficient for wage growth, our first two policy goals). Here, being employed full-time at the same rate as men is the most efficient policy change, while earning a GED is the next most efficient. These findings confirm that the poverty of the families of working mothers is often due to their low educational attainment and their inability to find regular full-time work. Earlier IWPR research (Spalter-Roth et al., 1989) shows that low-wage work is often unstable and short-lived, adding to the low earnings of those in work that pays low hourly wages.

Chart 7 summarizes the effectiveness of the proposed policy strategies in reducing family poverty. The proposed policy shifts range from having virtually no impact on moving families out of poverty (defined in two ways) to moving one in two families out of poverty. The same strategies that are most likely to be successful in increasing the wages of working mothers are, in general, the same strategies that are successful in moving their families out of poverty. They include: (1) the three-pronged strategy of maximizing work experience, increasing working mothers returns to experience commensurate to that of white men, and increasing their share of full-time jobs to the level of ever-married men--a strategy that would decrease these families' poverty rate by approximately half (54 percent to an above-Poverty I threshold and 49 percent to an above-Poverty II threshold); (2) simultaneously increasing the returns to work experience and maximizing work experience which would likely bring more than one out of three families out of poverty, regardless of whether definition I or II is used; (3) the two-pronged strategy of

CHART 7

Effectiveness of Policy Strategies in Decreasing Family Poverty



Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

increasing educational levels, which would likely bring more than one out of five families out of poverty (defined either way); (4) increasing employment in full-time, year-round jobs, which would likely bring about one out of five families out of poverty (defined either way); (5) decreasing regional wage disparities, which would likely bring about one of six families of all poor working mothers, and more than one out of five families of black working mothers, out of poverty; and (6) the single-pronged educational strategy of encouraging GED completion.

The main difference observed in the effectiveness of the factors in achieving the three different policy goals is that in achieving poverty reduction, working full-time takes on added importance, while the effect of white male returns is diminished (at least partly because poor mothers have fewer years of work experience). In addition to the effect working full-time has on the hourly wage, it has an added effect on family income through the increased hours of employment. Also, for reducing poverty, attaining the GED is the sixth most effective factor. But for increasing hourly wages, increasing years of work experience is sixth and attaining the GED drops to seventh place (while increasing years of work experience is the seventh most effective strategy in reducing poverty).

The increasing poverty rates for families with children have been attributed to two factors--one is the increasing number of single mother families and the second is the changing wage structure of low-income workers (Ruggles, 1991). As we have suggested, these factors are related--an important explanation for the poverty of single mother families is these mothers' low wages. As a result of testing the proposed policy shifts, we can suggest which of these strategies would likely be most effective in increasing working mothers' wages and in decreasing the poverty of single mother families.

Summary Of Findings From The Policy Analyses

We have found that the same policy strategies are generally leading strategies in achieving any of the three policy goals modelled. Table 11 provides a convenient summary of

the ranking of all 14 policies, according to the four impact dimensions measured (breadth, depth, efficiency, and effectiveness) for each of the three policies modelled and for all the race/ethnic groups included in the study.

Not surprisingly the three-pronged strategy of increasing years of work experience, increasing returns to experience, and increasing full-time employment is always and everywhere first in effectiveness. It also affects the most working mothers and has the largest wage impact. The two-pronged strategy of increasing experience and returns to experience is always and everywhere the second most effective strategy.

In raising wages, having white male returns is always the third most effective strategy. Region and the two-pronged education strategy generally appear in fourth or fifth place. For white mothers, increasing years of experience, while for black mothers (who generally have plenty of work experience), eliminating race discrimination is the sixth most effective policy strategy in raising wages. For Hispanic mothers, attaining a GED is in the top six.

For reducing poverty, education takes on added significance and full-time employment becomes a top strategy, while having white male returns alone drops out of the top set of policies. Eliminating race discrimination is always and everywhere effective in achieving the policy goals for black women. For white women, for poverty reduction according to definition II, union coverage becomes the sixth most important factor.

In short, while there are a few important differences, related either to race and ethnicity or to the nature of the policy goal sought, the commonalities stand out more. One of the important, but less expected, findings in this research is the importance of region in explaining mothers' low earnings, and its greater salience for minority women.

Table 11
Panel A.

RANK OF POLICY STRATEGIES
ALL WORKING MOTHERS

Policy	Breadth	Depth	Policy Goal 1 Sufficiency Wage		Policy Goal 2 Wage Mobility		Policy Goal 3			
							Poverty I		Poverty II	
			Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness
Education										
GED	9	4	3	7	1	7	2	6	2	6
GED + Some College	6	7	6	4	5	4	7	3	5	3
92% Full-time	10	5	4	9	2	9	1	4	1	4
Experience										
White Male Returns	1	3	5	3	6	3	13	9	13	10
Maximum Experience	5	12	12	6	12	6	12	7	12	7
Maximum Exper. + White Male Returns	1	2	2	2	4	2	10	2	7	2
35% Union	7	8	8	8	7	8	6	8	5	8
15% Hi Tech	13	6	9	11	8	11	8	12	9	11
Occupation										
15% Female in Male Dominated	14	9	7	13	9	13	3	13	10	13
30% Female in Male Dominated	11	9	10	10	10	10	5	10	11	12
Region-NE	4	11	11	5	11	5	11	5	8	5
Job Training	12	13	14	14	14	14	--	--	--	--
No Discrimination	8	--	13	12	13	12	8	11	4	9
Maximum Experience + White Male Returns + 92% Full-time	1	1	1	1	3	1	4	1	3	1

Table 11
Panel B.

RANK OF POLICY STRATEGIES
NON-HISPANIC WHITE WORKING MOTHERS

Policy	Breadth	Depth	Policy Goal 1 Sufficiency Wage		Policy Goal 2 Wage Mobility		Policy Goal 3			
							Poverty I		Poverty II	
			Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness
Education										
GED	10	5	3	8	1	9	2	6	2	7
GED + Some College	6	6	5	4	5	4	6	3	4	4
92% Full-time	8	4	4	8	2	8	1	4	1	3
Experience										
White Male Returns	1	3	6	3	6	3	12	10	12	9
Maximum Experience	5	11	11	6	11	6	10	8	11	7
Maximum Exper. + White Male Returns	1	2	2	2	4	2	8	2	7	2
35% Union	7	8	10	7	7	7	4	7	4	6
15% Hi Tech	12	6	9	11	8	11	3	11	6	10
Occupation										
15% Female in Male Dominated	13	9	7	12	10	12	9	12	8	12
30% Female in Male Dominated	9	9	8	10	9	10	4	9	9	11
Region-NE	4	12	12	5	12	5	10	5	9	5
Job Training	11	13	13	13	13	13	--	--	--	--
No Discrimination	--	--	--	--	--	--	--	--	--	--
Maximum Experience + White Male Returns + 92% Full-time	1	1	1	1	3	1	6	1	3	1

Table 11
Panel C.

RANK OF POLICY STRATEGIES
NON-HISPANIC BLACK WORKING MOTHERS

Policy	Breadth	Depth	Policy Goal 1 Sufficiency Wage		Policy Goal 2 Wage Mobility		Policy Goal 3			
							Poverty I		Poverty II	
			Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness
Education										
GED	9	5	6	7	1	7	8	10	2	8
GED + Some College	6	6	7	5	6	5	7	5	5	4
92% Full-time	10	7	5	8	5	10	1	3	9	4
Experience										
White Male Returns	1	3	3	3	7	3	11	7	10	7
Maximum Experience	7	12	12	10	12	9	12	9	12	10
Maximum Exper. + White Male Returns	1	2	2	2	4	2	5	2	3	2
35% Union	8	8	8	9	8	8	9	11	3	9
15% Hi Tech	--	--	--	--	--	--	--	--	--	--
Occupation										
15% Female in Male Dominated	12	9	9	11	9	12	2	11	10	12
30% Female in Male Dominated	11	9	10	12	10	11	4	8	8	11
Region-NE	5	4	4	4	3	4	6	4	6	3
Job Training	--	--	--	--	--	--	--	--	--	--
No Discrimination	1	11	11	6	11	6	10	6	7	6
Maximum Experience + White Male Returns + 92% Full-time	1	1	1	1	2	1	3	1	1	1

Table 11
Panel D.

RANK OF POLICY STRATEGIES
HISPANIC WORKING MOTHERS

Policy	Breadth	Depth	Policy Goal 1 Sufficiency Wage		Policy Goal 2 Wage Mobility		Policy Goal 3			
							Poverty I		Poverty II	
			Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness	Efficiency	Effectiveness
Education										
GED	6	4	4	5	1	5	--	--	--	--
GED + Some College	4	9	9	4	9	4	--	--	--	--
92% Full-time	9	8	8	9	7	9	--	--	--	--
Experience										
White Male Returns	1	3	5	3	8	3	--	--	--	--
Maximum Experience	5	10	10	7	10	7	--	--	--	--
Maximum Exper. + White Male Returns	1	2	2	2	5	2	--	--	--	--
35% Union	8	6	6	8	3	8	--	--	--	--
15% Hi Tech	10	4	7	10	6	10	--	--	--	--
Occupation										
15% Female in Male Dominated	--	--	--	--	--	--	--	--	--	--
30% Female in Male Dominated	--	--	--	--	--	--	--	--	--	--
Region-NE	7	7	3	6	2	6	--	--	--	--
Job Training	--	--	--	--	--	--	--	--	--	--
No Discrimination	--	--	--	--	--	--	--	--	--	--
Maximum Experience + White Male Returns + 92% Full-time	1	1	1	1	4	1	--	--	--	--

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

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FEASIBILITY AND IMPLICATIONS

In contrast to the sex-segregated models of analysis, this study investigated the impact of human capital and job characteristics, as well as family situation, on the wages of working mothers, as they vary by race/ethnicity, marital status, and educational levels. The study hypothesized that the complex socioeconomic trends of the last decades--including increases in human capital, changes in industrial and occupational characteristics, and changes in patterns of regional economic growth--have more impact on working mothers' wages than does their family situation. We conclude that this hypothesis was confirmed.

Our findings strongly suggest that the way to raise women's wages is not necessarily, as a sex-segregated analysis would suggest, for them to remain single and/or childless, or alternatively to depend on the earnings of a male breadwinner. Instead, our findings suggest that the same factors that can be expected to raise men's wages--human capital, the quality of jobs, and the conditions of work--also appear to be most important in raising the earnings of working mothers.

In testing the efficiency and effectiveness of the fourteen specific strategies designed to increase the wages of working mothers, we made a series of assumptions that affected the breadth of each strategy (i.e., the number and percentage of working mothers who could benefit from each). We limited the breadth of some of the strategies based on structural or historical constraints. For example, the movement of working mothers into male-dominated occupations was limited by the 30 percent tipping point, after which the occupation would no longer be classified as male-dominated. The percentage of working mothers who could benefit from membership in unions or coverage by collective bargaining agreements was limited to 35 percent--the post-World War II high for union membership.

In contrast, other policy strategies were assumed to be more universal in scope with all those who could benefiting from the strategy. For example, we assumed that all those working

mothers who did not have a high school diploma would obtain their GED. We likewise assumed that all working mothers who did not have the maximum years of work experience would obtain this experience, and that all working mothers would receive full white male returns for their years of work experience. In the case of these more universal strategies, we could have limited or phased-in the effects. For example, we could have assumed that only half of all working mothers without a high school diploma would obtain their GED, or that working mothers would obtain only half of white male returns to experience. Readers should be aware that the results we obtained are shaped by the suppositions that we made. As is the case in all estimating procedures, the assumptions affect the outcomes.

The breadth of our assumptions is undoubtedly related to the feasibility of implementing each of the proposed policy strategies. Increasing the number of women employed in male-dominated occupations by five percentage points would appear to be more feasible than increasing their numbers by 20 percentage points. Universal strategies that entail increasing all working mothers' returns to experience to a white male level, or that entail increasing the wage levels of all working mothers in the South to the level of their peers in the Northeast, appear at first to be unrealistic and impractical.

These more universal strategies can best be viewed as heuristic devices or as long-term goals. They show the extent to which working mothers' earnings can be increased if we rid ourselves of the myth that a working mother's earnings are not necessary to her family's survival and that her work is a secondary, temporary activity which ceases with marriage or childbirth. Implementing these bold strategies requires that we cast aside a sex segregated model of analysis and instead focus on the importance of human capital, the quality of jobs, and the conditions of work. Although they may represent long-range goals, none of the most effective strategies is impossible, and each can be reached, albeit in incremental steps, using specific remedies and policies.

The series of policy tests we performed shows that achieving white male returns to work

experience is the single most effective strategy for increasing working mothers' wages. At first glance, this does not appear to be a very practical or effective strategy. Yet, upon reflection, there are a series of specific policies or remedies already in operation that can lead to this goal. Comparable worth remedies that revalue women's jobs based on their measurable worth to firms rather than on stereotyped notions of the value of women's work will likely have the impact of decreasing the race and gender gap in returns to years of work experience. Comparable wage adjustments are most likely to be achieved through collective bargaining agreements. Hence, labor law reforms that would have the effect of increasing workers' ability to unionize and to bargain collectively would likely result in closing the gap between male and female returns to experience. Both collective bargaining and pay equity, as well as other initiatives, can lead to improved step increases or longevity pay in women's jobs, a convention in men's jobs that is sorely lacking in women's jobs. Other strategies, such as programs designed to enhance job mobility and glass ceiling initiatives designed to increase women's job mobility to higher echelon, higher paying jobs and more general efforts to develop and extend job ladders in typical women's occupations (such as clerical work) would likely increase the returns to experience that women workers receive. And finally, increased monitoring and enforcement of anti-discrimination laws and regulations would likely decrease the gap in returns to experience because black and Hispanic working mothers currently receive the lowest returns to experience.

Increasing working mothers' human capital through increased education is the second most effective strategy for increasing their earnings. Throughout this report, we have seen that increased education results in substantially increased wages. Policies that focus on creating a more highly-skilled, highly-educated workforce will benefit working mothers, along with all other groups of workers, as these human capital policies increase productivity and living standards.

Strategies that overcome cultural stereotypes of working mothers as tangential, secondary workers by increasing their ability to stay in the workforce while meeting their family responsibilities, thus increasing their years of work experience, have the third greatest effect on

working mothers' wages. Federal, state, and corporate policies--such as family and medical leave, child care, and temporary disability insurance--that meet the needs of workers with family responsibilities will likely have the effect of increasing the earnings of working mothers, especially those currently earning less than a sufficiency wage. Likewise, strategies that encourage firms to generate full-time rather than part-time jobs, and to hire more women in these jobs, will also have a positive effect on working mothers' earnings, especially for those mothers at the very bottom of the earnings distribution. The past several decades have seen a continued growth in women's labor force participation, and in their years of work experience, while that of white men has shown a small but steady decline. A convergence in women's and men's work experience does not seem impossible or even remote. This convergence should contribute as well to women receiving more equal returns to their experience.

Uneven regional growth rates, with higher growth in the traditionally low-wage Southern region of the country, have the effect of lowering wages with particularly negative consequences for the earnings of black working mothers. Decreasing regional wage disparities by increasing wages to the level of the Northeast region of the country is the fifth most effective strategy for increasing working mothers' earnings. This is an especially effective strategy for black and Hispanic working mothers, and those earning less than a sufficiency wage. Uneven regional growth rates result from structural changes and macro-economic policies (including the changing composition of exports and capital investment). Micro-economic policies, such as labor law reform, which could result in greater unionization and higher wages in the Southern and Western regions of the country, also have a role to play.

Although we began this study with assumptions about the positive impact of industrial and occupational shifts on working mothers' wages, we have found that movement into male-dominated occupations and high-tech industries would increase wages for very few working mothers, making these strategies ineffective overall. The limited nature of these results is explained by the necessary structural constraints placed on the policy shifts (i.e., only 15 percent

of women can move into high-tech industries and only 30 percent of mothers can move into male-dominated occupations at most). Both new policies to stimulate growth in high-tech industries and enforcement of existing policies that prevent discrimination against working mothers in these industries would be important in increasing women's wages and opportunities in these industries. Likewise, economic policies would be necessary to increase the numbers of traditionally male-dominated jobs--especially skilled blue-collar jobs. Enforcement of anti-discrimination policies would be required to increase the percentage of working mothers in these jobs and to prevent the declining wages that generally occur when a previously male-dominated occupation "tips" and becomes a mixed-gender or female occupation.

Finally, a comment about the feasibility and implications of job training as a strategy for increasing working mothers' wages. We have found that job training is the least effective strategy for increasing earnings of all those studied. We have noted, however, that our measure of job training may not be valid. And we have limited the percentage of women who could benefit from this strategy to 40 percent. Currently, there is much criticism directed at public job training programs (such as JTPA) for discriminating against women (and especially black women) and training them for low-paid women's occupations. But our findings, which suggest that increasing mothers' employment in male-dominated jobs is only moderately effective, lead us to further question job-training as a strategy, even if race and gender discrimination were diminished. Increasing human capital through increased years of education appears to be a more effective strategy. Further research, using more appropriate measures, is required before the effectiveness and feasibility of job training can be evaluated fully.

In conclusion, we have found that strategies for increasing working mothers' wages are those that would increase the returns to their work experience, increase their human capital, and aid them in staying in the workforce. These strategies are feasible, especially if they are implemented in incremental steps, through available remedies. But implementation of these strategies on the necessary scale is unlikely until policy makers and employers make a

commitment to overcoming cultural stereotypes. They must come to view working mothers as having an equal need and an equal right to employment in jobs with wages sufficient to support themselves and their families.

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APPENDIX TABLES

Appendix Table 1.
High Growth Industries

Agriculture	
(021) Horticultural Services	51.1%
Manufacturing	
Durable Goods	
(232) Woodbuildings and mobile homes	34.0%
(242) Furniture and fixtures	40.4%
(362) Guided missles, space vehicles and parts	47.6%
Transportation, communications, and other public utilities	
(421) Air transportation	44.2%
(432) Services incidential to transportation	40.4%
Retail Trade	
(600) Misc. general merchandise stores	32.0%
(612) Motor vehicle dealers	32.3%
(640) Household appliances, T.V., and radio stores	43.2%
(651) Sporting goods, bicycles, and hobby stores	33.5%
(662) Mail order houses	43.1%
(682) Misc. retail stores, not specified retail trade	34.6%
Finance, Insurance, Real Estate	
(702) Credit agencies, n.e.c.	53.0%
(710) Security, commodity brokerage, investment cos.	37.9%
(712) Real Estate, including real estate-insurance law offices	31.9%

Appendix Table 1, cont.

Services	
(721) Services to dwellings and other buildings	67.9%
(730) Commercial research, development and testing labs	30.4%
(732) Business mgmt. and consulting services	54.5%
(740) Computer and data processing services	74.3%
(742) Business services, n.e.c.	53.8%
(750) Automobile services, except repaid	53.8%
Personal Services	
(762) Hotels and motels	38.2%
Professional and related services	
(821) Offices of chiropractors	42.6%
(822) Offices of optometrists	32.7%
(861) Job training and vocational rehab. services	58.8%
(862) Child care services	50.7%
(870) Residential care facilities, w/o nursing	49.8%
(841) Legal services	35.3%
(872) Museums, art galleries, and zoos	36.5%
(882) Engineering, architecture, surveying services	38.0%

Source: IWPR calculations based on annualized CPS employment data from the 1989 Handbook of Labor Statistics (Table 19).

Appendix Table 2

List of High Technology Industries

Level I

SIC	
873	Research and Testing Services
286	Industrial Organic Chemicals
283	Drugs
285	Paints and Allied Products
284	Soap, Cleaners, and Toilet Goods
737	Computer and Data Processing Services
376	Guided Missiles, Space Vehicles, Parts
291	Petroleum Refining
281	Industrial Inorganic Chemicals
289	Miscellaneous Chemical Products
357	Computer and Office Equipment
282	Plastics Materials and Synthetics
381	Search and Navigation Equipment
366	Electronic Components and Accessories
871	Engineering and Architectural Services
382	Measuring and Controlling Devices
384	Medical Instruments and Supplies
371	Motor Vehicles and Equipment
299	Miscellaneous Petroleum and Coal Products
822	Colleges and Universities
899	Services, nec
362	Electrical Industrial Apparatus
211	Cigarettes
131	Crude Petroleum and Natural Gas
287	Agricultural Chemicals
874	Management and Public Relations
367	Electronic Components and Accessories
386	Photographic Equipment and Supplies
355	Special Industry Machinery
372	Aircraft and Parts
335	Nonferrous Rolling and Drawing

Level II

351	Engines and Turbines
261	Pulp Mills
369	Miscellaneous Electrical Equipment and Supplies
379	Miscellaneous Transportation Equipment
267	Miscellaneous Converted Paper Products
365	Household Audio and Video Equipment
229	Miscellaneous Textile Goods
359	Industrial Machinery, nec
356	General Industrial Machinery
348	Ordnance and Accessories, nec

NOTE: This list is not yet published and is based upon the percentage of Research and Development Employment as reflected in the latest available data from the Occupational Employment Statistics (OES) survey. These data were collected in 1987, 1988, and 1989 from all manufacturing industries and selected non-manufacturing industries where sufficient R & D employment was available. The industries on this list in the top category have a percentage of R & D employment at least 50% higher than the average for all R & D industries. The second group includes industries with R & D employment equal or greater than the average but less than 50% above. These industries are drawn from 3-digit 1987 Standard Industrial Classification (SIC) categories.

Source: Unpublished data based upon definition developed by Paul Hardlock of the U.S. Department of Labor.

Appendix Table 3.

CHARACTERISTICS OF WORKING MOTHERS BY MARITAL STATUS, BY EDUCATION LEVEL AND RACE AND ETHNICITY

(MEANS OR PERCENTAGES)

Panel A.

Demographics	SELECTED SAMPLE FAMILY TYPES							
	(1) Mar. Non-Hisp. White HS	(2) Mar. Non-Hisp. White Col.	(3) Former Mar. Non-Hisp. White HS	(4) Former Mar. Non-Hisp. White Col.	(5) Mar. Hispan. HS	(6) Mar. Non-Hisp. Black HS	(7) Mar. Non-Hisp. Black Col.	(8) Former Mar. Non-Hisp. Black HS
Age in Years	34.7	35.3	34.4	37.1	33.9	34.8	33.8	36.9
Presence of Children								
% Child Under 6 Years	39.4	49.8	37.3	25.9	50.0	40.8	56.9	23.5
% Baby in Last Yr	5.9	9.9	2.2	1.1	5.5	5.0	11.0	1.0
% 2+ Kids & 1 Under 6 Years	20.7	25.8	13.6	8.5	35.4	25.0	36.7	11.8
% Disabled	6.8	4.2	8.9	8.5	3.7	7.5	2.8	13.7
% Full-time Working Spouse	80.9	81.7	----	----	82.9	79.2	80.7	----
% Other Family Earnings	6.1	2.8	17.2	8.0	10.2	7.8	5.3	17.7

Panel B.

Human Capital Characteristics	SELECTED SAMPLE FAMILY TYPES							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Education								
% No H.S. Diploma	17.9	----	6.4	----	44.5	24.2	----	41.2
% H.S. Diploma	82.1	----	83.6	----	55.5	75.8	----	58.8
% Some College	----	54.0	----	64.1	----	----	61.5	----
% College Graduate or More	----	46.0	----	35.9	----	----	38.5	----
% Any Job Training	29.4	30.1	32.0	38.1	25.0	26.7	27.5	36.3
Years of Work Experience	8.7	9.3	8.9	10.6	7.7	7.4	8.6	8.6

Appendix Table 3, cont.

CHARACTERISTICS OF WORKING MOTHERS BY MARITAL STATUS,
BY EDUCATION LEVEL AND RACE AND ETHNICITY

(MEANS OR PERCENTAGES)

Panel C.

	SELECTED SAMPLE FAMILY TYPES							
Job Characteristics	(1) Mar. Non-Hisp. White HS	(2) Mar. Non-Hisp. White Col.	(3) Former Mar. Non-Hisp. White HS	(4) Former Mar. Non-Hisp. White Col.	(5) Mar. Hispan. HS	(6) Mar. Non-Hisp. Black HS	(7) Mar. Non-Hisp. Black Col.	(8) Former Mar. Non-Hisp. Black HS
Occupation								
% Full-time, Full-year	77.3	81.9	79.4	83.3	69.5	74.2	80.7	72.5
% Traditional Female	50.2	52.1	47.4	47.8	46.3	40.0	49.5	43.1
% Mixed Occupation	25.5	27.9	26.5	27.4	28.0	37.5	28.4	32.4
% Male Occupation	11.0	9.7	11.7	13.3	8.5	4.2	11.0	9.8
Industry								
% in High-tech Industry	6.6	8.7	8.4	8.5	9.1	10.8	11.0	5.9
% in High-growth Industry	12.4	12.7	10.6	18.5	11.0	10.0	15.6	7.8
% in High-tech & High-growth	0.8	1.8	0.6	2.2	0.6	0.8	2.8	----
% in Non-trad. Occ. + Hi-growth	1.0	1.7	1.9	5.2	----	0.8	1.8	----
% in Non-trad. Occ. + Hi-tech	1.3	1.4	1.9	1.1	3.0	----	3.7	1.0
Region of Country								
Northeast	19.1	18.9	22.0	19.6	12.2	17.5	11.9	20.6
Midwest	32.9	29.7	29.8	28.5	7.9	13.3	22.9	15.7
South	16.7	13.6	17.5	13.3	23.2	26.7	29.4	22.5
South Atlantic	18.2	17.1	16.4	12.2	4.9	40.0	27.5	37.3
West	13.1	20.6	14.2	26.3	51.8	2.5	8.3	3.9
% Union	14.1	19.2	15.9	18.9	15.2	10.0	21.1	19.6
Average Hourly Wage (in $)	6.42	9.33	6.59	9.72	5.77	5.62	8.60	5.63
% Earnings < $5.80	49.1	23.6	46.8	20.4	61.0	62.5	31.2	63.7

Appendix Table 3, cont.

CHARACTERISTICS OF WORKING MOTHERS BY MARITAL STATUS,
BY EDUCATION LEVEL AND RACE AND ETHNICITY

(MEANS OR PERCENTAGES)

Panel D.

	SELECTED SAMPLE FAMILY TYPES							
	(1) Mar. Non-Hisp. White HS	(2) Mar. Non-Hisp. White Col.	(3) Former Mar. Non-Hisp. White HS	(4) Former Mar. Non-Hisp. White Col.	(5) Mar. Hispan. HS	(6) Mar. Non-Hisp. Black HS	(7) Mar. Non-Hisp. Black Col.	(8) Former Mar. Non-Hisp. Black HS
% Families in Poverty	2.1	0.4	10.9	4.8	4.3	5.8	1.8	31.4
N	1433	1386	359	270	164	120	109	102

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Appendix Table 4.

RETURNS AND LOSSES IN ADDITIONAL HOURLY WAGES
FOR FACTORS THAT HAVE AN EFFECT ON WAGES OF WORKING MOTHERS,
BY RACE AND ETHNICITY
(Full Regression Model)

VARIABLES	TOTAL	NON-HISPANIC WHITE	NON-HISPANIC BLACK	HISPANIC
COLLEGE	3.78***	3.69***	4.36***	2.51*
SOMECOL	2.28***	2.30***	2.19***	1.70***
HS	1.29***	1.22***	1.34***	1.48***
FULLTIME	1.24***	1.27***	1.00***	1.08***
MALEOCC	.96***	1.00***	.86**	.43
MIXOCC	.64***	.65***	.64***	.74**
UNION	1.09***	1.06***	.98***	1.38***
HITECH	1.05***	1.10***	.58	1.48***
GROWLEV	.07	.08	-.66*	.68
NTRDGROW	.60	.62	.32	1.01
EXPER	.07***	.08***	.05***	.06***
JOBTR	.32***	.39***	-.20	.09
MIDWEST	-.81***	-.75***	.94***	-1.91***
WEST	-.13	-.02	-.78	-.70*
SOUTH	-.92***	-.67***	-1.79***	-1.70***
SATLANT	-.61***	-.52***	-1.34***	-.24
BLACK	-.43***	-----	-----	-----
HISPANIC	-.25	-----	-----	-----
SPFTIME	-.15	-.16	-.04	-.37
PROOTHER	-.01***	-.01***	-.01**	-.01**
MAREDUC	.09	.13	.08	1.93
MOREYON	.07	.03	-.03	.65**
BABY	.14	.17	-.41	.38
NEVMAR	-.16	-.48	.05	.09
NEVMBABY	-.14	.43	.33	-.86
PANEL	-.07	-.10	.19	-.25
ESTEXP	.52***	.53***	.66**	.33
R2	.3035	.2789	.3956	.3639

*** Significant at the .01 level
** Significant at the .05 level
* Significant at the .10 level

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

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Appendix Table 5.

RETURNS AND LOSSES IN ADDITIONAL HOURLY WAGES FOR FACTORS THAT HAVE AN EFFECT ON WAGES OF WORKING MOTHERS, BY EDUCATION LEVEL

(Full Regression Model)

VARIABLES	High School Or Less	Some College or More
COLLEGE	.....	1.94***
HS GRADUATE	1.10***	.....
FULLTIME	.99***	1.60***
MALEOCC	.61***	1.45***
MIXOCC	.36***	1.06***
UNION	1.19***	1.01***
HITECH	1.02***	1.08***
GROWLEV	.26	-.18
NTRDGROW	.38	.92
EXPER	.05***	.10***
JOBTR	.33***	.25
MIDWEST	-.58***	-1.06***
WEST	.01	-.24
SOUTH	-.88***	-.87***
SATLANT	-.54***	-.61**
BLACK	-.45***	-.33
HISPANIC	-.21	-.38
SPFTIME	-.18*	-.02
PROOTHER	-.01***	-.03***
MAREDUC	-----	-.10
MOREYON	-.03	.16
BABY	.08	.22
NEVMBABY	.02	-1.21
PANEL	-.05	-.09
ESTEXP	.37***	.77***
R2	.2034	.2309

***Significant at the .01 level

** Significant at the .05 level

* Significant at the .10 level

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.

Appendix Table 6

Panel A1.

DISTRIBUTION OF TOTAL WORKING MOTHERS' WAGES
BY PERCENTAGE OF SUFFICIENCY WAGE
($5.80 per Hour in 1987 $)

	Wage Levels					
	0-50% $0-$2.90	51-75% $2.91-4.35	76-100% $4.36-5.80	101-125% $5.81-7.25	126-150% $7.26-8.70	Total
N	798,974	3,344,817	3,822,168	3,336,017	2,587,412	13,889,388
Percent	5.8	24.1	27.5	24.0	18.6	100.0

Panel A2.

PERCENT OF WOMEN WHO MOVED UP AT LEAST ONE WAGE LEVEL
TOTAL WORKING MOTHERS

Policy	# moved up at least 1 wage level	Wage Levels: Up from 0-50% to 51-75% of Suff. Wage or higher	Up from 51-75% to 76-100% of Suff. Wage or higher	Up from 75-100% to 101-125% of Suff. Wage or higher	Up from 101-125% to 126-150% of Suff. Wage or higher	Up from 126-150% to 151% + of Suff. Wage or higher	Total
Education							
GED	2136	7.5	40.1	30.8	15.0	6.6	100.0
GED + Some College	6585	5.6	31.3	29.7	21.2	12.2	100.0
92% Full-time	1733	8.3	36.0	28.9	15.4	11.4	100.0
Experience							
White Male Returns	10629	5.0	21.1	27.0	25.7	21.1	99.9
Maximum Experience	3423	7.4	26.7	29.0	22.6	14.3	100.0
Max. Exper. + White Male Returns	13082	5.5	23.6	27.6	24.1	19.2	100.0
35% Union	1915	3.8	30.0	28.5	20.0	17.8	100.1
15% High Tech	679	6.6	24.3	29.5	23.4	16.1	99.9
Occupation							
15% Female in Male Dominated	349	1.7	24.4	33.8	20.6	19.5	100.0
30% Female in Male Dominated	974	5.7	23.4	29.7	19.8	21.3	99.9
Region-NE	5136	6.3	29.5	27.9	21.2	15.1	100.0
Job Training	193	7.3	29.5	22.3	25.4	15.5	100.0
No Discrimination	598	12.2	31.6	25.4	20.9	9.9	100.0
Max. Experience + White Male Returns + 92% Full-time	13212	5.6	23.7	27.7	24.0	19.0	100.0

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Appendix Table 6

Panel B1.

DISTRIBUTION OF NON-HISPANIC WHITE WORKING MOTHERS' WAGES BY PERCENTAGE OF SUFFICIENCY WAGE

($5.80 per Hour in 1987 $)

	Wage Levels					
	0-50% $0-$2.90	51-75% $2.91-4.35	76-100% $4.36-5.80	101-125% $5.81-7.25	126-150% $7.26-8.70	Total
N	583,318	2,258,750	2,855,308	2,712,898	2,064,786	10,475,060
Percent	5.6	21.6	27.3	25.9	19.7	100.1

Panel B2.

PERCENT OF WOMEN WHO MOVED UP AT LEAST ONE WAGE LEVEL
NON-HISPANIC WHITE WORKING MOTHERS

Policy		Wage Levels					
	# moved up at least 1 wage level	Up from 0-50% to 51-75% of Suff. Wage or higher	Up from 51-75% to 76-100% of Suff. Wage or higher	Up from 76-100% to 101-125% of Suff. Wage or higher	Up from 101-125% to 126-150% of Suff. Wage or higher	Up from 126-150% to 151% + of Suff. Wage or higher	Total
Education							
GED	1191	7.5	38.1	30.6	16.8	7.0	100.0
GED + Some College	5009	5.0	28.1	29.8	23.6	13.5	100.0
92% Full-time	1311	8.9	33.6	27.8	18.2	11.5	100.0
Experience							
White Male Returns	8115	4.4	19.2	27.1	27.1	22.1	99.9
Maximum Experience	2762	6.5	25.1	28.9	24.0	15.5	100.0
Max. Exper. + White Male Returns	9845	5.3	21.1	27.4	25.9	20.3	100.0
35% Union	1384	4.5	27.1	28.5	20.4	19.6	100.1
15% High Tech	569	5.4	24.6	29.8	22.8	17.2	99.8
Occupation							
15% Female in Male Dominated	269	2.2	20.8	35.3	24.2	17.5	100.0
30% Female in Male Dominated	854	5.9	20.6	31.5	20.8	21.1	99.9
Region-NE	3102	5.8	25.2	27.7	24.2	17.2	100.1
Job Training	193	7.3	29.5	22.3	25.4	15.5	100.0
No Discrimination	---	---	---	---	---	---	---
Max. Experience + White Male Returns + 92% Full-time	9955	5.3	21.3	27.4	25.9	20.1	100.0

Appendix Table 6

Panel C1.

DISTRIBUTION OF NON-HISPANIC BLACK WORKING MOTHERS' WAGES
BY PERCENTAGE OF SUFFICIENCY WAGE
($5.80 per Hour in 1987 $)

	Wage Levels					
	0-50% $0-$2.90	51-75% $2.91-4.35	76-100% $4.36-5.80	101-125% $5.81-7.25	126-150% $7.26-8.70	Total
N	128,605	695,499	579,161	414,093	311,864	2,129,222
Percent	6.1	32.6	27.2	19.4	14.7	100.0

Panel C2.

PERCENT OF WOMEN WHO MOVED UP AT LEAST ONE WAGE LEVEL
NON-HISPANIC BLACK WORKING MOTHERS

Policy		Wage Levels					
	# moved up at least 1 wage level	Up from 0-50% to 51-75% of Suff. Wage or higher	Up from 51-75% to 76-100% of Suff. Wage or higher	Up from 76-100% to 101-125% of Suff. Wage or higher	Up from 101-125% to 126-150% of Suff. Wage or higher	Up from 126-150% to 151% + of Suff. Wage or higher	Total
Education							
GED	419	9.8	45.8	25.5	13.3	5.5	99.9
GED + Some College	985	7.7	41.5	26.7	15.3	8.7	99.9
92% Full-time	252	5.2	40.1	36.5	7.1	11.1	100.0
Experience							
White Male Returns	1590	6.2	28.8	25.5	22.6	17.0	100.1
Maximum Experience	271	18.8	28.8	20.7	23.2	8.1	99.6
Max. Exper. + White Male Returns	1993	6.1	31.7	27.0	20.0	15.2	100.0
35% Union	277	2.5	36.8	30.0	17.7	13.0	100.0
15% High Tech	---	---	---	---	---	---	---
Occupation							
15% Female in Male Dominated	80	0	35.0	28.8	8.8	27.5	100.1
30% Female in Male Dominated	119	5.0	43.7	16.8	12.6	22.7	100.8
Region-NE	1588	6.3	38.8	26.8	18.1	10.0	100.0
Job Training	---	---	---	---	---	---	100.0
No Discrimination	598	12.2	31.6	25.4	20.9	9.9	100.0
Max. Experience + White Male Returns + 92% Full-time	2007	6.4	31.5	27.3	19.8	15.0	100.0

Appendix Table 6

Panel D1.

DISTRIBUTION OF HISPANIC WORKING MOTHERS' WAGES
BY PERCENTAGE OF SUFFICIENCY WAGE
($5.80 per Hour in 1987 $)

	Wage Levels					
	0-50% $0-$2.90	51-75% $2.91-4.35	76-100% $4.36-5.80	101-125% $5.81-7.25	126-150% $7.26-8.70	Total
N	87,052	390,568	387,698	209,026	210,762	1,285,106
Percent	6.8	30.4	30.2	16.2	16.4	100.0

Panel D2.

PERCENT OF WOMEN WHO MOVED UP AT LEAST ONE WAGE LEVEL
HISPANIC WORKING MOTHERS

Policy		Wage Levels					
	# moved up at least 1 wage level	Up from 0-50% to 51-75% of Suff. Wage or higher	Up from 51-75% to 76-100% of Suff. Wage or higher	Up from 76-100% to 101-125% of Suff. Wage or higher	Up from 101-125% to 126-150% of Suff. Wage or higher	Up from 126-150% to 151% + of Suff. Wage or higher	Total
Education							
GED	526	5.7	40.1	35.6	12.4	6.5	100.3
GED + Some College	591	6.8	41.1	33.7	11.0	7.2	99.8
92% Full-time	169	8.3	49.1	26.0	5.9	11.2	100.5
Experience							
White Male Returns	924	7.6	24.7	29.0	18.6	20.0	99.9
Maximum Experience	390	5.9	36.9	36.2	11.5	9.5	100.0
Max. Exper. + White Male Returns	1244	6.7	30.5	30.3	16.2	16.3	100.0
35% Union	254	2.0	38.2	27.2	19.7	12.6	99.7
15% High Tech	109	13.8	22.9	27.5	26.6	10.1	100.9
Occupation							
15% Female in Male Dominated	---	---	---	---	---	---	---
30% Female in Male Dominated	---	---	---	---	---	---	---
Region-NE	445	9.7	27.0	33.3	11.0	19.1	100.1
Job Training	---	---	---	---	---	---	---
No Discrimination	---	---	---	---	---	---	---
Max. Experience + White Male Returns + 92% Full-time	1251	6.6	30.3	30.7	16.1	16.2	99.9

Source: IWPR calculations based on 1987 data from the 1986 and 1987 panels of the Survey of Income and Program Participation.